



UNIVERSITY OF CALCUTTA

REGULATIONS

With amendments up to
15th February, 1930



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GOVERNMENT OF INDIA

HOME DEPARTMENT

EDUCATION

No. 600

Extract from the Proceedings of the Government of India in the Home Department—under date Simla, the 11th August, 1906.

RESOLUTION

Read—

A letter dated 9th July, 1906, from the Committee of the Senate of the Calcutta University, submitting, for the sanction of the Government, a complete body of draft regulations to provide for all matters relating to the University.

By the provisions of section 26 of the Indian Universities Act, 1904, the Senate of the Calcutta University are required to cause a revised body of regulations, providing for all matters relating to the University, to be prepared and submitted for the sanction of the Government of India within one year after the commencement of the Act. This period of one year expired on the 1st September, 1905. In exercise of the powers conferred by section 26 (1) of the Act the Government of India, at the request of the Senate, then fixed a further period of six months for the submission of revised regulations. When this period was nearing its close, the Government of India were advised by the Hon'ble the Advocate-General that it was not within their power to extend the time further, and that, in the event of a revised body of regulations not being submitted by the Senate before the end of February, 1906, such regulations could only be

made by the Government under the powers vested in them by section 26 (2) of the Act.

2. It proved impossible for so large a body as the Senate to complete their revision of the regulations within the time fixed and the legal authority to frame regulations thus passed out of their hands and devolved upon the Government of India. The Governor-General in Council was, however, anxious to avail himself as far as possible of the assistance of the Senate in the matter and to utilise the ample materials furnished by them, as a basis for the completion of the work. They were accordingly informed that the Government of India would be glad to receive from them any draft regulations or suggestions in regard to the regulations, which that body might be prepared to submit by the middle of April, 1906, and to give to these full consideration.

3. In order to ensure that the best use should be made of the materials which the labours of the Senate had provided, the Government of India decided to appoint a small Committee, consisting of members of the Senate representing the various interests concerned and, more especially the interests of private colleges in order to assist them in preparing the regulations. Their object in adopting this course was to give the Senate, by such representation, virtually as large a share in the settlement of the regulations as they would have enjoyed had they been able to comply with the provisions of section 26 (1) of the Act. The Committee was constituted as follows:—

President—The Hon'ble Mr. Justice Asutosh Mookerjee, Vice-Chancellor of the Calcutta University.

Members—Mr. G. W. Küchler, Indian Educational Service.
Rev. A. B. Wann, Principal, General Assembly's Institution.
Mr. N. N Ghose, Principal, Metropolitan Institution.
Babu Brajendranath Sil, Principal, Victoria College, Cooch-Behar.
Dr. E. Denison Ross, Officer in charge of the Records of the Government of India, and late Principal of the Calcutta Madrasah.

The duties of Secretary were performed by Dr. Ross. The Committee were supplied with copies of the drafts submitted by the Senate, and instructions were conveyed to them regarding the principles to be observed in framing the revised regulations. A copy of these instructions is annexed.

4. The distinguished academic attainments of the members of the Committee, the wide range of their experience of Indian

education, their personal connexion with the chief interests involved, and their intimate acquaintance with the working of the Calcutta University and with the previous discussions regarding the revision of the regulations, afford the best guarantee of their ability to represent the Senate for the purpose of preparing the final draft, and give great weight to the unanimous conclusions at which they have arrived. Their deliberations, which were based upon the draft regulations prepared by the Senate of the University, commenced on the 9th May and were concluded on the 9th July. During that time they held fifty meetings and the result of their labours has been laid before the Government of India, hav'ng examined these regulations with regulations, divided into fifty-four chapters and dealing in ample detail with all matters relating to the University of Calcutta. The Government of India, having examnied these regulations with the care and attention due to the far-reaching issues which they raise, see no reason for introducing any additions or alterations; and they now accord formal sanction to them in the precise form in which they left the hands of the Committee.

5. In promulgating the regulations for the future government of the University, the Government of India think it advisable to draw attention to the principal chapters and to explain the intention and effect of some of the more important provisions.

6. The first chapter deals with the transaction of business by the Senate, and seeks to guard against any decision being arrived at without adequate notice and full discussion. Regulation 4 follows the existing bye-laws in providing that no question shall be brought before the Senate which has not been fully considered by the Syndicate. Regulations 63-65 lay down elaborate rules for elections, and Regulation 66 enables a minority to give formal expression to its views. Regulation 67 contains a provision, which experience has shown to be desirable, for giving a reasonable degree of finality to the decisions of the Senate.

7. Chapter III introduces several important changes in respect of Faculties of the University. It creates a new Faculty devoted to Science, and it lays down that a member of the Senate need not necessarily belong to any Faculty, and that members who are competent to advise in more than one department of learning should be placed on two Faculties but not on more than two. The Committee have also framed rules for the appointment of Faculties, and care has been taken that the Senate shall have an effective voice in the matter. Regulations 5 and 6 deal with the important question of expanding the Faculties under section 14, sub-section (2), clause (*b*) of the Indian Universities Act, by the admission of qualified persons, who are not Fellows, to take part in the working of the University.

8. In Chapter IV, which treats of the Syndicate, the most important feature is that that body will be elected partly by the Senate and partly by the Faculties. This departure from the existing practice is justified by two considerations. In the first place, the Syndicate is the executive committee of the Senate, and the Senate as a body, ought to have some voice in its appointment. In the second place, the proposed system will enable the Senate, after the elections have been made by the Faculties, to secure the representation on the Syndicate of particular academic studies or interests. The powers and duties of the Syndicate are fully defined in this chapter, and include the important power of granting or withdrawing the recognition of schools by the University.

9. Chapter VII provides for a whole-time Registrar who will be appointed for five years and will be eligible for re-appointment upon the expiry of the first term. He must be a graduate of position with experience of University affairs. The salary (Rs. 800—50—1,000) and the leave and pension rules will, it is hoped, enable the University to secure the services of a competent officer for this important post. Chapter VIII creates the new appointment of an Inspector of Colleges. Unless the University has a permanent Inspector of its own, the work of inspecting colleges must be done by members of the Senate who volunteer for the purpose or by officials lent by Government. Under such a system the inspecting authority may vary from year to year, and there can be no continuity in the standard of efficiency applied. The regulations provide that the Inspector shall be a person of high academic standing and possessing some experience of Indian colleges. Chapter X empowers the Senate, on the recommendation of the Syndicate, to appoint University Readers, who will be, in effect, temporary professors appointed to deliver courses of lectures on special subjects. They will be appointed for one year and the lectures delivered will be mainly for the benefit of graduates engaged in research work. It is hoped that both English and Indian scholars of distinction may be induced to undertake courses of this kind. Chapter XI contemplates the appointment of University Lecturers who will be for the most part professors in affiliated colleges or experts otherwise employed. The objects of the lectures will be to carry on post-graduate teaching. There are many colleges in Bengal which, though unable to undertake a complete course of lectures in an advanced subject, might be able to spare one or two members of their staff to lecture on a portion of such a course, so that the ground would be completely covered by two or more professors belonging to different colleges.

10. Chapter XII treats of the election of Fellows by Faculties under the provisions of section 9 of the Indian Universities Act. The regulations prescribe the method of elec-

tion and empower the Senate to hold a new election in cases of dispute. Chapter XIII relates to the election of Fellows by Registered Graduates under the provisions of section 7 of the Act, and confers a similar power on the Syndicate. Chapter XIV deals with the register of graduates to be kept under section 7, sub-section (2), of the Indian Universities Act. Graduates thus registered will have, in addition to the right of electing Fellows, the other substantial privileges enumerated in Regulation 8, including the use of the University Library on special terms, free admission to University lectures, and a copy of the University Calendar.

11. Chapter XV introduces, for the first time in the case of the Calcutta University, a register of University students in which the name of every student must be entered on first joining a college. If he is subsequently transferred from that college to another college, or if his name is removed from the college books for a breach of discipline or any other reason, or if under Chapter XXIII, Regulation 36, he is found guilty of gross misconduct, the fact will be noted in the register. Passes and failures at different examinations will be similarly noted. The register will thus furnish a continuous history of every student from the moment he enters the University to the time when he leaves. It will supply the college authorities with a correct account of the antecedents and career of every student with whom they are concerned, and it will place at the disposal of the University a valuable educational record.

12. In regard to non-collegiate or private students, Chapter XVI of the regulations provides that, except in very special cases, no person shall be admitted as non-collegiate student to any examination other than the Matriculation. The point of chief importance is that no person will, except in very special cases, be treated as a non-collegiate student who has been in any college whether affiliated or un-affiliated within a year of the Examination. This gives effect to the suggestion contained in paragraph 7 of the letter of instructions to the Committee. Three other regulations of this Chapter involve important principles. Regulation 4 prohibits the admission of a private student to an examination in a scientific subject unless he has received practical training in a laboratory. It thus affirms the sound principle that the study of science has no educational value unless it is accompanied by experimental and practical work. Regulation 5 provides that no non-collegiate student shall be admitted to an examination as a teacher who has not been engaged in teaching for at least three years. The object is to prevent persons who have failed at an examination from taking nominal employment as school teachers and thus gaining admission to an examination without attending lectures in a college. This practice is

detrimental both to their own studies and to the quality of the teaching in the schools which employ them.

13. Chapter XVIII dealing with the affiliation of colleges is based on section 21 of the Indian Universities Act to which it adds certain important conditions. The first of these is that the governing body required by the Act should comprise some representatives of the teaching staff. In the second place, the regulations provide that regard should be had to the character of the teachers and to the conditions governing their appointment. Thirdly, they lay down that, except with the special permission of the Syndicate (which can be granted only on specified grounds), no college lecturer is to have a class of more than 150 pupils. Under the existing system no limit is fixed, and great overcrowding is tolerated, with the result that the classes in some colleges contain as many as 250 pupils, a state of affairs injurious both to instruction and discipline. The Syndicate is empowered to make an exception to the rule in the case of special subjects or special professors.

14. It has been universally recognised that if higher education is to attain its full development, the existing colleges must not be excluded from the benefits of the reforming movement. The best means of enabling these institutions to adapt themselves to improved conditions is a problem of great difficulty and delicacy; and the Governor-General in Council believes that Chapter XIX has been so framed as to secure that continuous progress shall be made in the right direction without setting up an ideal standard which may not be at once attainable. Its provisions are, indeed, the necessary consequence of the change in the character and scope of affiliation which is effected by Chapter XVIII, Regulation 1. It has hitherto been the practice to grant affiliation in general terms up to a particular degree, such as the B.A., although many of the colleges thus affiliated are incapable of teaching all the subjects included in the B.A. course. Following the recommendation made in paragraph 69 of the Report of the Indian Universities Commission that "affiliation should be granted, and from time to time renewed, not in general terms, but with a more exact reference to the subjects and courses of study for which the college can make adequate provision," the new regulations lay down that affiliation shall be given specifically for each separate subject and each separate standard in each of the Faculties. They require, in short, that colleges shall be affiliated in what they can teach and not in what they cannot teach; a self-evident proposition which involves nothing more than the recognition of actual facts, and the renewal of affiliation in accordance with them. Regulation 7 of Chapter XIX provides for the application of this principle to existing colleges at the end of two years, and thus gives ample time to every college to complete its arrangements for imparting

instruction in certain subjects and standards. The renewal of affiliation on these terms will affect all colleges alike, since no college is equipped to teach every subject included in the course for a particular degree. The question of the extent to which affiliation should be renewed will be dealt with in the first instance by the Senate and Syndicate two years hence, and the ultimate decision will rest with the Government of India who will give the fullest consideration to the circumstances of each case and to the causes which may have precluded particular colleges from complying with the requirements of the Syndicate within the period prescribed. Chapter XX, which may be regarded as supplemental to Chapters XVIII and XIX, provides for systematic inspection by a salaried Inspector and one or two other experts who may be appointed from time to time by the Syndicate to assist in the inspection of a particular college, or of a specified group of colleges.

15. Chapter XXI, which treats of the recognition of schools, is practically identical with the draft submitted by the Senate which is understood to represent the unanimous opinion of the Fellows belonging to the Education Department in Bengal. It gives effect to the principle, enunciated by the Government of India in the Home Department letter of 24th October, 1902, reviewing the report of the Universities Commission, and reaffirmed in the instructions given to the Committee, that no school should be recognised by the University for the purpose of sending up pupils as candidates for the Matriculation Examination unless the Syndicate is satisfied, upon the report of the Director of Public Instruction or of an Inspector of Government Schools, or of some other competent person nominated in this behalf by the Syndicate, that the school conforms with regulations to be made by the Senate for the purpose. Under the regulations now sanctioned the recognition or non-recognition of a school will be the act of the University, and the functions of the Education Department or of the person nominated by the Syndicate to report on the claims of the school to recognition will be limited to placing before the University the information requisite to enable it to exercise its controlling authority. This solution of a question which is not altogether free from difficulty is indicated alike by the cordial relations which have existed between the University and the Education Department in the past, by their active co-operation in the supervision of a secondary education, and by the existence in Bengal and the new Province of a large number of private schools which receive no aid from Government, and which therefore are not inspected by the officers of the Education Department. With such schools the University alone is legally competent to deal and the Governor-General in Council is assured that its influence will be firmly and discreetly exercised in the direction of checking the spirit of

licence and self-assertion, the unbecoming manners, the impatience of control, and the disregard of all authority which have been displayed of late by the boys and masters of not a few schools in Bengal and the new Province. For both boys and masters the same excuse may be pleaded—imperfect methods of education which train the memory at the expense of the higher faculties and leave the judgment immature and the character undeveloped and unstable. It now rests with the University to correct these grave defects in the rising generation of students and to grapple with evils which, if allowed to continue, are bound to react injuriously upon the moral and intellectual progress of the race.

The conditions of recognition comprised in Chapters XXI and XXII require satisfactory proof to be given that a new school is actually wanted, and that its efficiency and stability are reasonably guaranteed. The other points mentioned in the letter of instructions are also amply provided for in the regulations. The only provision to which special attention need be drawn is that embodied in Chapter XXI, Regulation 2, and Chapter XXII, Regulation 5, which limits the number of students in each class. It is understood that this was adopted by the Senate without a dissentient voice. There can be no reasonable doubt that over-crowding in the lower classes of schools is largely answerable for the unsatisfactory training of Indian boys. If it is essential in all countries that young students in the beginning of their career should have individual attention paid to them as far as possible, it is especially so in India where knowledge has to be acquired through the medium of a difficult foreign tongue. If a boy is one of a class of 60 or 70 when he is first learning English, it is not surprising that his grammar, idiom, spelling and pronunciation should be bad; the wonder is that he learns even as much as he actually does. The regulations, following the unanimous recommendation of the Senate, remove the chief cause of these deficiencies by prescribing the maximum number of boys that may be taught in any class.

16. Chapter XXIII comprises regulations for the admission, transfer and withdrawal of students from affiliated colleges, the object of which is to maintain continuity of studies and to prevent capricious changes from college to college. Certain exceptional cases, where a transfer in the middle of a term is rendered necessary by the state of a student's health or by a change of residence on the part of his parent or guardian, are provided for in Regulation 14. The Governor-General in Council believes that these regulations will be welcome both to Principals of colleges and to the parents of students. Regulation 38 lays down that questions arising in connection with these regulations shall be decided by a special Committee of the Senate called the Transfer Committee. The proceedings of this Com-

mittee will be operative only if confirmed by the Syndicate, because under the Act the executive government of the University is vested in the Syndicate which is consequently responsible for the due observance and enforcement of the regulations. The provisions contained in this Chapter derive great authority from the fact that the Committee had among their number no less than four experienced Principals of Colleges.

17. The problem of the residence of students, which is dealt with in Chapter XXIV, is admittedly one of great difficulty. It has given rise, and is likely to give rise for some time to come, to the widest divergence of opinion. The regulations framed by the Committee are in strict accordance with the Act. They go somewhat beyond the recommendations of the Senate, who owing to the nature of the subject, and the differences of opinion among their body, were only able to submit an incomplete set of regulations. The Chapter provides for the residence of students under the following heads:—(1) Students residing with their parents and guardians, (2) Students residing in—(*a*) Collegiate Hostels, being boarding houses which form part of a college, admit only the students of that college and are under the control of its Principal; (*b*) Non-Collegiate Hostels, or boarding houses kept by private individuals and not forming part of a college; (*c*) Attached messes, or chummeries, all the members of which belong to the same college; (*d*) Unattached messes, being similar chummeries, the members of which belong to different colleges; (*e*) Private lodgings approved by the authorities of the college in which the student is reading. The necessity for recognising these last arises from the fact that even now many Hindu students are married at the age of 17 or 18 and have their wives and families with them in Calcutta.

For the purpose of administering the regulations relating to non-collegiate hostels, messes and private lodgings, provision is made for the appointment of a Committee of the Senate to be called "the Students' Residence Committee." Not less than three members of the Committee must be Indians. This is important, as the work of the Committee will be one of great difficulty and delicacy, and they will have to decide questions affecting the mode of life and the manners and social customs of Indian students. The whole subject is still in the experimental stage, and the regulations now sanctioned probably cannot be regarded as final. They embody, however, the experience of four members of the Committee who have conducted large hostels for several years, and the Government of India believe them to be as thorough and as practicable as it is possible to make them at present.

18. In Chapter XXV, which contains general rules for examinations, an attempt is made to discourage that style of

B

teaching whose sole aim and object is the passing of examinations; and elaborate rules are laid down for the setting of papers, methods of examining, appointment of examiners and other analogous matters. In future, every examination paper will be, wherever possible, the joint work of three examiners, and it is hoped that this will result in the questions set being a really fair test of the student's knowledge. In order to gauge the student's grasp of his subject, as distinguished from his acquaintance with the contents of a particular book, the questions will no longer be confined to the books recommended, which are to be taken as indicating merely the standard and extent of knowledge required in the subject defined by the syllabus.

19. Chapter XXVI treats of the general conditions of study in affiliated colleges. Here the regulations prescribe the minimum number of lectures to be delivered in each subject and follow the recommendation of a majority of the Senate in requiring every collegiate student to attend at least three-fourths of the lectures delivered in the college to which he belongs. Chapter XXVII lays down certain special conditions to be fulfilled by colleges which seek affiliation in a scientific subject. In section 21, sub-section (1), clause (*e*), of the Indian Universities Act, it is provided that where affiliation is sought in any branch of experimental science, arrangements must be made, in conformity with the regulations, for imparting instruction in that branch of science in a properly equipped laboratory or museum. The regulations contained in this chapter prescribe a minimum standard for each of the experimental sciences included in the curriculum for Degrees in Arts and Science. They provide, among other things, for the minimum size of the laboratory, and for the maximum number of students who may be taught by a single demonstrator. In Appendix B admirably full specifications are given of the equipment of laboratories, and the approximate cost. The information contained in this Chapter and its Appendix is based upon expert opinion and will be of the utmost value to colleges seeking affiliation in experimental science under the terms of the Act.

20. Chapter XXIX prescribes the mode of transition from the old to the new regulations. While enforcing the earliest possible introduction of the new regulations it allows ample time for the existing schools and colleges to adapt their staff and equipment to the new condition of things and to train their students in accordance with the principles enunciated in the regulations. It is believed that all possible cases have been provided for, but power has been reserved to the Syndicate to give special directions in contingencies not covered by the regulations.

21. Chapter XXX, dealing with the Matriculation Examination, is the first of a series of 24 chapters comprising the regu-

lations for the various examinations, in the different Faculties. Its main object is to secure that every candidate who matriculates will be likely to profit by more advanced studies. If greater thoroughness is to be demanded, the course must be simplified. If too many subjects are prescribed, all of them will be indifferently learnt. The regulations therefore proceed on the principle that whatever subject is required of a candidate must be known thoroughly up to an appropriate standard. In English, for example, they dispense with regular text books but provide that a number of books will be recommended in order to indicate the standard up to which candidates will be expected to have read. The examination will be held not in a prescribed portion of English literature, but in the English language, as used in daily life. It will be a test of the ability of candidates to write clear, simple and correct English, and of their intelligent comprehension of modern English applied to familiar subjects. The memory will be less heavily burdened than under the present system and there will be greater scope for the exercise of general intelligence. Similar principles are applied to the courses in Mathematics and in the classical languages. In making the candidate's own vernacular compulsory for Matriculation, the Committee have adopted the unanimous recommendation of the Indian Universities Commission. For candidates whose vernacular is not one of those recognised, an alternative paper will be allowed in English composition, French or German.

English History has been reserved for the Intermediate Examination in Arts; and this reduction of the course has rendered it possible to require in addition to the History of India, some knowledge of the present administration of British India and of the progress of India under British rule. This subject will be treated in a text book to be prepared by the University. Candidates who take up History will be allowed to submit their answers in English or in their own vernacular. This will enable the student to read the History of India in his mother tongue, and will render the study both more attractive and more profitable. At the Matriculation stage students do not know English well enough to be able to read history in that language with advantage and are tempted to have recourse to keys and summaries of leading events, which admit of being committed to memory, but which fail to arouse any intelligent interest in the subject.

The pass standard for the Matriculation Examination is defined in the regulations, which require that in order to pass in English, a candidate must obtain 40 per cent. of the full marks assigned to the two papers in English; or if he can get 40 per cent. in the first paper (translation and essay) then 36 per cent. of the full marks of the two papers. In order to pass in the vernacular, a candidate must obtain 36 per cent. and in order

to pass in compulsory Classics and Mathematics, 30 per cent. in each, and of the aggregate marks of all the papers, 36 per cent. This means that if a candidate gets less than 36 per cent. of the full marks in any subject he has to make up for the deficiency by getting more than 36 per cent. in some other subject.

These changes are the outcome of much discussion among the most competent authorities, and they represent a compromise between the extreme views of some who would prematurely raise the standard to an ideal height and others who are influenced by an excessive solicitude for the backward student. They may therefore be expected to satisfy those who have at heart the best interests of higher education. Their intention is not to set the scholar a harder task, but to eliminate unsound methods of teaching and to gauge the student's knowledge by a more reasonable test. Now that the age for Matriculation has been raised to 16, candidates will be on the average about a year older when they come up for Matriculation than has hitherto been the case and will therefore be qualified to stand a more thorough test in English. For the purpose of acquiring a colloquial knowledge of a language every additional year of study is of great value, and the new system recognises this by laying less stress on mere book work.

22. Chapter XXXI treats of the Intermediate Examination in Arts. After a student has matriculated, he is allowed to proceed either to a degree in Arts or a degree in Science. The Committee have decided that the Intermediate Examination for Arts students cannot be in all respects identical with the Intermediate Examination for Science students. If a proper standard is to be maintained at the examination for Bachelor of Science, it is essential that the student should begin in some measure to specialise in scientific subjects at the Intermediate stage. This cannot be secured if Science students are burdened at that stage with a large number of literary subjects At the same time it will be observed that a certain amount of purely literary training is also prescribed for them. The principle of bifurcation at the Intermediate stage is supported by the precedent of the University of London.

23. Chapter XXXII defines the examination for the Degree of Bachelor of Arts. The principal changes which are made by the regulations are: (1) composition in the vernacular is obligatory on all candidates, as was recommended by the Universities Commission; (2) candidates are given a greater choice of subjects; (3) Political Economy is treated as a separate subject and not as an adjunct to the course in History; (4) every candidate will have to take up English and Vernacular Composition and two other subjects at his choice, one of which may be a scientific

subject. The different courses have been equalised in point of difficulty as far as practicable.

24. The changes introduced in the examination for the Degree of Master of Arts by Chapter XXXIII are in accordance with the recommendations of the Senate, and they are of fundamental importance. Under the old regulations, any Bachelor of Arts may proceed to the M.A. Degree immediately after graduation. In general, he does so after the lapse of a year. Under the new regulations a minimum interval of two years must elapse between the taking of the Bachelor's Degree and the Master's Degree. The object of this is to secure adequate courses for the M.A. Degree. Again under the old regulations, a candidate for the M.A. Degree who received a training in a college is placed on the same footing as a candidate who appeared as a private student. This is obviously undesirable if candidates are to be encouraged to avail themselves of the benefits of the post-graduate teaching. Non-collegiate students, however, are not debarred from appearing at the M.A. Examination, but they cannot do so until three years after graduating. Chapter XXXIV institutes a new Degree, that of Doctor of Philosophy, which will be obtainable only by research. It will be open to all Masters of Arts of at least three years' standing.

25. Chapter XXXV deals with the Intermediate Examination in Science, and is the first of four chapters treating of different examinations in the Faculty of Science. The Intermediate Examination in Science is not an examination in scientific subjects alone. It is felt that it would not be to the real advantage of the students to be deprived of all literary training at so early a stage of their University career; the examination, therefore, will be partly literary and partly scientific. Every candidate will be examined in the English language and literature and in Vernacular Composition up to the standard prescribed for the Intermediate Examination in Arts.

26. The examination for the Degree of Bachelor of Science (Chapter XXXVI) will be in scientific subjects alone, on the mode of the course prescribed by the University of London. A candidate is given his choice of three subjects out of eight, but he may not take up Mathematics for the first time at this stage, nor can he offer either Physics or Chemistry unless he has taken up both Mathematics and Physics at the Intermediate Examination. In each subject there is a Pass Course as well as an Honours Course; and in all subjects other than Mathematics, there will be a searching practical examination, candidates being required to pass separately in the theoretical and practical portions. The syllabuses in all the subjects are comprehensive and the test applied will conform to the most approved modern

standards. The standard for a Pass and for Honours is similar to that prescribed for the B.A. Examination.

27. Chapter XXXIX treats of the examinations for a Licentiate in Teaching and Chapter XL deals with the Degree of Bachelor of Teaching. These Chapters, which are based on the recommendations of the Indian Universities Commission, are a new departure so far as the Calcutta University is concerned. There are to be two examinations. The first of these, namely, the examination for the Licentiate, will be open to all persons who have passed the Intermediate Examination in Arts or Science. These candidates will be examined not only in the theory, practice and methods of teaching, but also in a course of modern English up to the standard of the B.A. degree. The second is the examination for the Degree of Bachelor of Teaching, which will be open to all persons who have graduated in Arts or Science. These candidates will be examined in the theory, practice and methods of teaching, and in the history of educational ideas and methods. The examinations will be both theoretical and practical, and the regulations require students to have attended a course of lectures on the theory of teaching in a college affiliated for the purpose. Although no such college exists at present, the immediate introduction of these examinations is justified on the ground that any candidate who prepares himself seriously for them will, even without undergoing a regular course of lectures on the subject, make a more efficient teacher than one who has not studied teaching at all. No candidate will, however, be admitted, unless he has either undergone a course of practical training in one of the existing training schools, or has served as a teacher in one of the schools, recognised by the University. It may be anticipated that these two examinations in teaching will serve a useful purpose and will become very popular. After a sufficient number of persons have passed them it may be advisable for the University to rule that no school will be permitted to prepare candidates for the Matriculation Examination which has not on its staff one or more certificated teachers. Such teachers will doubtless be in great demand and it may confidently be expected that they will regard education in the light of a serious profession to which they may properly devote their lives.

28. Chapter XLI which defines the examination for the Degree of Bachelor of Law introduces several important reforms. In the first place, the examination for the Bachelor's Degree has been divided into two parts, of which the preliminary part may be taken at the end of the first year of Law study after graduation in Arts or Science; while the final part may be taken one year after the preliminary examination has been passed. This will tend to encourage continuous study of the subject. The

minimum number of lectures to be delivered in each subject has been defined, and the example of American Universities has been followed in requiring students to attend a class for the discussion of legal questions, and in laying down that in every paper (other than the papers on Jurisprudence and Roman Law) a certain proportion of the marks shall be allotted to problems.

29. Chapter XLIV to XLVI of the Regulations are occupied with the three examinations leading up to the Degree of Bachelor of Medicine. Regarding the duration of this course there has been great difference of opinion and several conflicting considerations had to be borne in mind. On the one side it is urged that before a medical student can be regarded as qualified to practise his profession he must have devoted (1) an entire year to acquiring an adequate knowledge of the preliminary scientific subjects of Inorganic Chemistry, Botany, Physics and Zoology; (2) two years to the study of Anatomy and Physiology; (3) at least three years to practical work in Medicine and Surgery in a recognised hospital. If it is accepted, on the authority of expert opinion, that these periods cannot be reduced without sacrificing professional efficiency, it follows that the medical course must extend over six years from the time when the student's general education has reached the point at which it is possible for him to enter with advantage upon his technical studies. Hitherto he has been held to have reached this point on passing the First Examination in Arts, for this was considered the earliest stage at which he could have a sufficient command of English to enable him to follow lectures delivered in that language. Assuming this condition to be maintained, it is argued on the other side that the introduction of a six years' course for the degree of Bachelor of Medicine would bear hardly upon the student, since it would defer the time at which he could begin to practise his profession, and might look forward to earning a living, until the age of 24 or even later. The argument merits serious consideration, and its weight was recognised by the Senate who recommended the retention of the five years' course. In their anxiety, however, to render this course as efficient as possible they overloaded it with such a multiplicity of subjects and lectures that their scheme of study could not by any possibility be compressed into the time allotted to it. Their proposals were open to the further objection that they did not allow a candidate who had passed the Intermediate Examination in Science that relief from purely scientific studies to which he would be legitimately entitled.

30. The Committee were thus called upon to reconcile the modern demand for a high standard of professional efficiency with the reasonable plea, advanced on behalf of the students, that they should not be unduly delayed in entering upon the work of their lives. This they have done by providing (1) that

students who have passed the Matriculation Examination shall be permitted, as is the practice in the University of London, to proceed at once to a Medical degree; (2) that for such students the period of study shall be six years; (3) that the period shall be reduced by one year in the case of students who have passed the Intermediate Examination in Science before taking up the medical course. The practical effect will be, that if a student passes his Matriculation Examination at the age of sixteen, he will be able to engage in the pursuit of his profession when he is twenty-two, or a year earlier than is now ordinarily possible. If, however, he postpones his decision to embrace a medical career until after he has passed the Intermediate Examination in Science, he cannot begin to practise until he is twenty-three.

31. The settlement of this vexed question arrived at by the Committee was indicated by the reforms which they had introduced in the Matriculation Examination. The standard now prescribed at this stage is in no way less advanced than that of the Preliminary Examination which the General Council of Medical Education of the United Kingdom requires candidates to pass before they can be registered as medical students. It demands in effect from the students a sound practical knowledge of the English language and may therefore be expected to enable them to follow the lectures of their Professors with less difficulty than is now the case even with those who have passed the First Examination in Arts. If this hope is realised, there is no reason why a student should not enter upon his medical studies immediately after Matriculation.

32. Such in outline are the principal features of the regulations which were framed in the first instance by the Senate and have subsequently been recast and expanded in various directions by a Committee of experts in close touch with the varied social life of the University and representing a wide range of learning and experience. The promulgation of these regulations marks a notable advance in the movement for the extension and progressive development of the higher forms of education which was initiated by the Universities Commission. Yet the stage thus reached is merely the starting point of a gradual process of re-construction, which will make large demands upon the energy and wisdom of the University authorities during the present generation of academic life. The regulations now sanctioned fill in the frame-work supplied by the Universities Act; they provide the machinery for reform; but they leave it to the Senate to put the machinery in motion and to determine the speed at which it shall be worked. With them it will rest to secure by a judicious exercise of their influence and authority, the general adoption of sound principles of education, and to spread abroad a true conception of the value and uses of

knowledge. Where the interests affected are so numerous, and the problems still unsolved so complex, no hasty or premature action need be apprehended. The advancement of learning, the promotion of research, the fostering of collegiate life, and the encouragement of individual effort are the objects at which the University will aim, and the Government of India are confident that in working towards these ends the Senate will be supported by the loyal and hearty co-operation of all colleges and schools within their jurisdiction. In conclusion the Governor-General in Council desire to tender his cordial thanks to the Vice-Chancellor and the Committee for the ability, industry, and judgment with which they have discharged the arduous and responsible task imposed upon them.

ORDER—Ordered that this Resolution be published in the Supplement to the *Gazette of India.*

[True extract.]

H. H. RISLEY,

Secretary to the Government of India.

ACT OF INCORPORATION

ACT OF INCORPORATION

ACT NO. II OF 1857

Passed on the 24th January, 1857

AS AMENDED BY ACT NO. XII OF 1876, ACT NO. VIII OF 1904, ACT NO. XI OF 1911 AND ACT NO. VII OF 1921.

An Act to establish and incorporate an University at Calcutta.

Preamble.

WHEREAS, for the better encouragement of Her Majesty's subjects of all classes and denominations within the Presidency of Fort William in Bengal and other parts of India in the pursuit of a regular and liberal course of education, it has been determined to establish an University at Calcutta for the purpose of ascertaining, by means of examination, the persons who have acquired proficiency in different branches of Literature, Science, and Art, and of rewarding them by Academical Degrees as evidence of their respective attainments, and marks of honour proportioned thereunto; and whereas, for effectuating the purposes aforesaid, it is expedient that such University should be incorporated: It is enacted as follows:—

Incorporation.

I. The following persons, namely,

The Right Honourable CHARLES JOHN VISCOUNT CANNING, Governor-General of India.

The Honourable JOHN RUSSELL COLVIN, Lieutenant-Governor of the North-Western Provinces.

The Honourable FREDERICK JAMES HALLIDAY, Lieutenant-Governor of Bengal.

The Honourable SIR JAMES WILLIAM COLVILE, Knight, Chief Justice of the Supreme Court of Judicature in Bengal.

The Right Reverend DANIEL WILSON, Doctor of Divinity, Bishop of Calcutta.

The Honourable GEORGE ANSON, General, Commander-in-Chief of the Forces in India.

The Honourable JOSEPH ALEXANDER DORIN, Member of the Supreme Council of India.

The Honourable JOHN LOW, Major-General,
Companion of the Most Honourable Order of the Bath,
Member of the Supreme Council of India.
The Honourable JOHN PETER GRANT,
Member of the Supreme Council of India.
The Honourable BARNES PEACOCK,
Member of the Supreme Council of India.
CHARLES ALLEN, Esquire,
Member of the Legislative Council of India.
HENRY RICKETIS, Esquire,
Provisional Member of the Supreme Council of India.
CHARLES BINNY TREVOR, Esquire,
Judge of the Sudder Court of India.
Prince GHOLAM MUHAMMAD.
WILLIAM RITCHIE, Advocate-General in Bengal.
CECIL BEADON, Esquire,
Secretary to the Government of India.
Colonel HENRY GOODWYN, of the Bengal Engineers,
Chief Engineer in Bengal.
WILLIAM GORDON YOUNG, Esquire,
Director of Public Instruction in Bengal.
Lieutenant-Colonel WILLIAM ERSKINE BEKER,
of the Bengal Engineers,
Secretary to the Government of India.
Lieutenant-Colonel ANDREW SCOTT WAUGH,
of the Bengal Engineers, Surveyor-General of India.
KENNETH MACKINNON, Esquire, Doctor in Medicine
HODSON PRATT, Esquire,
Inspector of Schools in Bengal.
HENRY WALKER, Esquire,
Professor of Anatomy and Physiology in the Medical College of Bengal.
THOMAS THOMPSON, Esquire, Doctor in Medicine,
Superintendent of the Botanical Garden at Calcutta.
FREDERICK JOHN MOUAT, Esquire, Doctor in Medicine,
and Fellow of the Royal College of Surgeons.
Lieutenant WILLIAM NASSAU LEES, of the Bengal Infantry.
The Reverend WILLIAM KAY, Doctor of Divinity,
Principal of Bishop's College.
The Reverend ALEXANDER DUFF, Doctor of Divinity.
THOMAS OLDHAM, Esquire,
Superintendent of the Geological Survey of India.
HENRY WOODROW, Esquire,
Inspector of Schools in Bengal.
LEONIDAS CLINT, Esquire,
Principal of the Presidency College.
PROSONNO COOMAR TAGORE,
Clerk Assistant of the Legislative Council of India.

RAMAPERSHAD RAY,
Government Pleader in the Sudder Court of Bengal.
The Reverend JAMES OGILVIE, Master of Arts.
The Reverend JOSEPH MULLIENS, Bachelor of Arts.
Moulavy MUHAMMAD WUJEEH,
Principal of the Calcutta Madrasah.
ISWAR CHANDRA BIDYASAGAR,
Principal of the Sanskrit College of Calcutta.
RAMGOPAL GHOSH,
Formerly Member of the Council of Education.
ALEXANDER GRANT, Esquire,
Apothecary to the East India Company.
HENRY STEWART REID, Esquire,
Director of Public Instruction in the North-Western Provinces,

being the first Chancellor, Vice-Chancellor, and Fellows of the said University, and all the persons who may hereafter become or be appointed to be Chancellor, Vice-Chancellor, or Fellows, as hereinafter mentioned, so long as they shall continue to be such Chancellor, Vice-Chancellor, or Fellows, are hereby constituted and declared to be one Body Politic and Corporate by the name of the University of Calcutta; and such Body Politic shall by such name have perpetual succession, and shall have a common seal, and by such name shall sue and be sued, implead and be impleaded, and answer and be answered unto, in every Court of Justice within the territories under the Government of India.

Power to hold and dispose of property.

II. The Body Corporate shall be able and capable in law to take, purchase, and hold any property movable or immovable, which may become vested in it for the purpose of the University by virtue of any purchase, grant, testamentary disposition, or otherwise; and shall be able and capable in law to grant, demise, alien, or otherwise dispose of, all or any of the property, movable and immovable, belonging to the University; and also do all other matters incidental or appertaining to a Body Corporate.

Effect of retirement.

III. If any person being Chancellor, Vice-Chancellor, or Fellow of the said University shall leave India without the intention of returning thereto, his office shall thereupon become vacant.

Chancellor.

IV. The Governor of the Presidency of Fort William in Bengal for the time being shall be the Chancellor of the said University.

Vice-Chancellor.

V. The office of Vice-Chancellor shall be held for two years only. Whenever a vacancy shall occur in the office of Vice-Chancellor of the said University by death, resignation, departure from India, effluxion of time, or otherwise, the Local Government of Bengal shall, by notification, nominate a fit and proper person, being one

of the Fellows of the said University, to be Vice-Chancellor in the room of the person occasioning such vacancy: Provided that on any vacancy in the said office, which shall occur by effluxion of time, the Local Government of Bengal shall have power to re-appoint any future Vice-Chancellor to such office.

The appointment of a Fellow may be cancelled.

VII. The Local Government of Bengal may cancel the appointment of any person already appointed or hereinafter to be appointed a Fellow of the University, and, as soon as such order is notified in the *Gazette* the person so appointed shall cease to be a Fellow.

Chancellor, Vice-Chancellor and Fellows to superintend the affairs of the University.

VIII The Chancellor, Vice-Chancellor, and Fellows, for the time being, shall have the entire management of and superintendence over the affairs, concerns, and property of the said University; and in all cases unprovided for by this Act, it shall be lawful for the Chancellor, Vice-Chancellor, and Fellows, to act in such manner as shall appear to them best calculated to promote the purposes intended by the said University.

Fees.

XV. The said Chancellor, Vice-Chancellor, and Fellows shall have power to charge such reasonable fees for the Degrees to be conferred by them, and upon admission into the said University, and for continuance therein, as they, with the approbation of the Local Government of Bengal shall from time to time see fit to impose. Such fees shall be carried to one General Fee Fund for the payment of expenses of the said University, under the direction and regulations of the Local Government of Bengal, to whom the accounts of income and expenditure of the said University shall once in every year be submitted for such examination and audit as the said Local Government of Bengal may direct.

Annual Accounts.

THE INDIAN UNIVERSITIES ACT, 1904 (VIII of 1904).

SECTIONS. CONTENTS.

ACT NO. VIII OF 1904.

PASSED BY THE GOVERNOR-GENERAL OF INDIA IN COUNCIL.

(Received the assent of the Governor-General on the 24th March, 1904.)

This Act came into force on the 1st September, 1904.

(Amended by Act No. VII of 1921.)

An Act to amend the law relating to the Universities of British India.

Whereas by Acts II, XXII and XXVII of 1857, Act XIX of 1882 and Act XVIII of 1887, Universities were established and incorporated at Calcutta, Bombay, Madras, Lahore and Allahabad;

And whereas by Act XLVII of 1860 the Universities of Calcutta, Madras and Bombay were empowered to confer such degrees as should be appointed in the manner provided by the Act;

And whereas by Act I of 1884 the Universities of Calcutta, Madras and Bombay were further empowered to confer the honorary degree of Doctor in the Faculty of Law;

And whereas it is expedient to amend the law relating to the Universities of British India;

It is hereby enacted as follows:—

Short title and commencement.

1. *(1)* This Act may be called the Indian Universities Act, 1904; and

(2) It shall come into force on such date as the Government may fix in this behalf by notification in the *Gazette of India* or the local official Gazette, as the case may be.

Interpretation.

2. *(1)* This Act shall be deemed to be part of each of the Acts by which the said five Universities were respectively established and incorporated.

(2) In this Act, unless there is anything repugnant in the subject or context,—

(a) the term "College" or "affiliated College" includes, any collegiate institution affiliated to or maintained by the University;

(b) the expression "the Government" means the Local Government; and

(c) the expressions "the University" and "the Act of Incorporation" and any expression denoting any University, authority or officer or any statute, regulation, rule or bye-law of the University shall be construed with reference to each of the said Universities respectively.

The University.

Incorporation and powers of the University.

3. The University shall be and shall be deemed to have been incorporated for the purpose (among others) of making provision for the instruction of students, with power to appoint University Professors and Lecturers, to hold and manage educational endowments, to erect, equip and maintain University libraries, laboratories and museums, to make regulations relating to the residence and conduct of students, and to do all acts, consistent with the Act of Incorporation and this Act, which tend to the promotion of study and research.

Constitution and powers of the Senate

4. (1) Notwithstanding anything contained in the Act of Incorporation, the Body Corporate of the University shall consist of—

(a) the Chancellor;

(b) the Vice-Chancellor;

(c) the *ex-officio* Fellows; and

(d) the Ordinary Fellows—

(i) elected by registered Graduates or by the Senate;

(ii) elected by the Faculties; and

(iii) nominated by the Chancellor.

(2) The Ordinary Fellows shall, save as herein otherwise provided, hold office for five years:

Provided that an Ordinary Fellow who has vacated his office may, subject to the provisions of this Act, be elected or nominated to be an Ordinary Fellow.

(3) The Body Corporate shall be the Senate of the University and all powers which are by the Act of Incorporation or by this Act conferred upon the Senate, or upon the Chancellor, Vice-Chancellor and Fellows in their corporate capacity, shall be vested in, and exercised by, the Senate constituted under this Act, and all duties and liabilities imposed upon the University by the Act of Incorporation shall be deemed to be imposed upon the Body Corporate as constituted under this Act.

(4) No act done by the University shall be deemed to be invalid merely by reason of any vacancy among either class of elected Ordinary Fellows or by reason of the total number of Ordinary Fellows or of members of the profession of education to be included among Ordinary Fellows, being less than the minimum prescribed by this Act.

Fellows.

5. (1) Notwithstanding anything contained in the Act of Incorporation, the persons for the time being performing the duties of the offices mentioned in the list contained in the first schedule to this Act or added to the said list under sub-section (2) shall be the *ex-officio* Fellows of the University.

Ex-officio Fellows.

(2) The Government may, by notification published in the local official Gazette, make additions to, or alterations in, the list of offices contained in the said schedule.

Provided that the number of *ex-officio* Fellows shall not exceed ten.

6. (1) In the case of the Universities of Calcutta, Bombay and Madras, the number of Ordinary Fellows shall not be less than fifty or exceed one hundred; and of such number—

Ordinary Fellows.

(a) ten shall be elected by registered Graduates;
(b) ten shall be elected by the Faculties; and
(c) the remainder shall be nominated by the Chancellor.

(2) In the case of the Universities of the Punjab and Allahabad, the number of Ordinary Fellows shall not be less than forty nor exceed seventy-five; and of such number—

(a) ten shall be elected by the Senate or by registered Graduates;
(b) five shall be elected by the Faculties; and
(c) the remainder shall be nominated by the Chancellor.

Provided that in the case of the University of Allahabad the Chancellor may direct that such number as he may specify of the Ordinary Fellows referred to in clause (a), shall be elected by the Senate, and the remainder by registered Graduates.

(3) The election of any Ordinary Fellow shall be subject to the approval of the Chancellor.

(4) Elections of the Ordinary Fellows by the Faculties and nominations of such Fellows by the Chancellor under this section shall be made in such manner as to secure that not less than two-fifths of the Fellows so elected and so nominated respectively shall be persons following the profession of education.

Ordinary Fellows elected by registered Graduates.

7. (*1*) Once in every year, on such date as the Chancellor may appoint in this behalf, there shall, if necessary, be an election to fill any vacancy among the Ordinary Fellows elected by registered Graduates.

(*2*) The Syndicate shall maintain a register on which any Graduate who—

(*a*) has taken the degree of Doctor or Master in any Faculty or

(*b*) has graduated in any Faculty not less than ten years before registration, shall, subject to the payment of an initial fee of such amount as may be prescribed by the regulations, be entitled to have his name entered upon application made within the period of three years from the commencement of this Act or of one year from the date on which he becomes so entitled:

Provided that if such application is made after the expiry of either of the said periods, the applicant shall be entitled to have his name entered on payment of the said initial fee, and of such further sum as may be prescribed by the regulations.

(*3*) The name of any Graduate entered on the register shall, subject to the payment of an annual fee of such amount as may be prescribed by the regulations, be retained thereon, and in case of default, shall be removed therefrom, but shall, at any time, be re-entered upon payment of all arrears:

Provided that a Graduate whose name has been already entered on the register may at any time compound for all subsequent payments of the annual fee by paying the sum prescribed in this behalf by the regulations.

(*4*) No person other than a Graduate whose name is entered on the said register shall be qualified to vote or to be elected at an election held under sub-section (*1*).

(*5*) A Graduate registered under this section shall be entitled to such further privileges as may be determined by the regulations.

Ordinary Fellows elected by **Senate.**

8. (*1*) The provision of section 7 shall not apply to the University of the Punjab or to the University of Allahabad until the Chancellor, with the previous sanction of the Governor-General in Council and by notification in the local official Gazette, so directs; and until such time the Ordinary Fellows of the said Universities, who would be elected by registered Graduates if the said provisions were in force, shall be elected by the Senate.

(*2*) In the case of the University of the Punjab and the University of Allahabad, there shall, if necessary, be an election,

once in every year, on such date as the Chancellor may appoint in this behalf to fill any vacancy among the Ordinary Fellows elected by the Senate.

Election by the Faculties.

9. (1) Once in every year, on such date as the Chancellor may appoint in this behalf, there shall, if necessary, be an election to fill any vacancy among the Ordinary Fellows elected by the Faculties.

(2) An election under sub-section (1) shall be held, subject to such directions prescribing the qualifications of the persons to be elected as may, from time to time, be given by the Chancellor with a view to secure the return of duly qualified persons and the fair representation of different branches of study in the Senate.

Nomination by the Chancellor.

10. Subject to the provisions of section 6, the Chancellor may nominate any number of fit and proper persons to be Ordinary Fellows.

Vacating of office.

11. (1) Any Ordinary Fellow may, by letter addressed to the Chancellor, resign his office.

(2) Where any Ordinary Fellow has not attended a meeting of the Senate, other than a Convocation, during the period of one year, the Chancellor may declare his office to be vacated.

Transitory Provisions.

Election and nomination of Ordinary Fellows within one year after commencement of Act, and temporary continuance of existing University administration.

12. In their application to the election and nomination of Ordinary Fellows within the period of one year after the commencement of this Act and to the current business of the University, the provisions of this Act shall be read as subject to the following restrictions and modifications:—

(a) In the case of the Universities of Calcutta, Bombay, and Madras, the Chancellor shall, as soon as may be after the commencement of this Act, make an order directing that the Ordinary Fellows, who under the said provisions are to be elected by registered Graduates, shall be elected by the elected Fellows holding office at the commencement of this Act, or by such Graduates of the University as the Chancellor may determine, or partly by elected Fellows and partly by such Graduates, and in such manner as the Chancellor may direct.

(b) When the Ordinary Fellows mentioned in clause (a) have been elected, the Chancellor shall proceed to the

nomination of Ordinary Fellows under section 6, sub-section (*1*), clause (*c*).

(*c*) The Ordinary Fellows mentioned in clauses (*a*) and (*b*) shall, as soon as may be after their appointment and in such manner as the Chancellor may direct, elect the Fellows who under the said provisions are to be elected by the Faculties.

(*d*) In the case of the Universities of the Punjab and Allahabad, the Chancellor shall, as soon as may be after the commencement of this Act, proceed to nominate Ordinary Fellows under section 6, sub-section (*2*), clause (*c*).

(*e*) When Ordinary Fellows have been appointed under clause (*d*), the Chancellor shall make an order directing that the Fellows who under the said provisions are to be elected by the Senate, shall be elected by the Ordinary Fellows appointed under clause (*d*), or by elected Fellows holding office, at the commencement of this Act, or partly by such Ordinary Fellows and partly by elected Fellows, in such manner as the Chancellor may direct.

(*f*) The Ordinary Fellows mentioned in clauses (*d*) and (*e*) shall, as soon as may be after their appointment, and in such manner as the Chancellor may direct, elect the Fellows who under the said provisions are to be elected by the Faculties.

(*g*) An election under clause (*c*) or clause (*f*) shall be made subject to such directions prescribing the qualifications of the persons to be elected as may be given by the Chancellor, with a view to secure the return of duly qualified persons and a fair representation of different branches of study in the Senate.

(*h*) As soon as Ordinary Fellows have been nominated and elected under clauses (*a*), (*b*) and (*c*), or under clauses (*d*), (*e*) and (*f*), as the case may be, and the persons so elected have been approved by the Chancellor, the Chancellor shall declare that the Body Corporate of the University has been constituted in accordance with the provisions of this Act, and shall append to the declaration a list of the Senate, and shall forward the said declaration and the appended list to the Governor-General in Council, who shall cause the de claration and list to be published in the *Gazette of India*.

(*i*) The seniority of the Fellows included in the list mentioned in clause (*h*), shall be determined by the order in which their names appear in the list.

(*j*) Until the said declaration is published under clause (*h*) the Fellows holding office at the commencement of

this Act shall, together with the Chancellor and the Vice-Chancellor, continue to be the Senate of the University, and shall be entitled to exercise the powers conferred upon them by the Act of Incorporation.

(*k*) Every Ordinary Fellow elected or nominated under this section shall, unless his Fellowship is previously vacated by death, resignation or any other cause, hold office for not less than three years.

(*l*) At or about the end of the third year from the publication of the declaration mentioned in clause (*h*), the names of, as nearly as may be, one-fifth of the total initial number—

(*i*) of Ordinary Fellows elected under clause (*a*) or clause (*c*) as the case may be;

(*ii*) of Ordinary Fellows elected under clause (*e*) or clause (*f*); and

(*iii*) of Ordinary Fellows nominated by the Chancellor (after deducting from the said one-fifth the names in each class which have previously been removed from the list mentioned in clause (*h*) by reason of death, resignation or any other cause) shall be drawn by lot from among the elected and the nominated Ordinary Fellows whose names were included in the list mentioned in clause (*h*), and those whose names are so shown shall thereupon cease to be Ordinary Fellows.

(*m*) At or about the end of the fourth, fifth and sixth years from the publication of the said declaration, the names of Ordinary Fellows shall be drawn by lot from each class of Ordinary Fellows included in the said list, in the manner provided in clause (*l*), so as to secure that, as nearly as may be, one-fifth of the Fellowships of the Ordinary Fellows so included in each class shall be vacated in each year.

(*n*) An Ordinary Fellow elected or nominated under this section, who has not previously vacated his Fellowship shall cease to be a Fellow at the end of the seventh year from the publication of the said declaration.

(*o*) The Vice-Chancellor holding office at the commencement of this Act, shall continue to hold office until the publication of the said declaration, and shall, if he is a member of the Senate as constituted under this Act, continue to hold office as Vice-Chancellor for the remainder of the term for which he was originally appointed.

(*p*) The members of the Syndicate holding office at the commencement of this Act, shall continue to conduct the executive business of the University until the publication of the said declaration; and, upon such publication, the Senate shall, in such manner as the

Chancellor may direct, appoint a provisional Syndicate to conduct the executive business of the University until the Syndicate has been constituted under this Act.

(q) The Senate as constituted under this Act may give orders for the provisional constitution of Faculties, Boards of Studies and of any Board or Committee of the Senate, pending the constitution of such Faculties, Boards and Committees in conformity with the regulations.

(r) University Examiners and all officers and servants of the University shall continue to hold office and to act, subject to the conditions governing their tenure of office or employment, except in so far as such conditions may be altered by competent authority.

(s) The statutes, regulations and bye-laws of the University in force at the commencement of this Act shall continue to be in force, except in so far as the said statutes, regulations and bye-laws shall be altered or repealed by competent authority.

Honorary Fellows.

Honorary Fellows.

13. (1) (a) A Fellow holding office at the commencement of this Act shall cease to be a Fellow.

(b) Where a Fellow included in clause (a) does not become a Fellow under this Act, he shall be an Honorary Fellow for life.

(c) Where a Fellow included in clause (a) becomes a Fellow under this Act, he shall, whenever and so often as he ceases to be a Fellow under this Act, become an Honorary Fellow as provided in clause (b).

(2) The Chancellor may nominate any person to be an Honorary Fellow for life, who is eminent for his attainments in any branch of learning, or is an eminent benefactor of the University, or is distinguished for services rendered to the cause of education generally.

(3) Notwithstanding anything contained in this section, any Fellow, who at the commencement of this Act is entitled as such to vote for the election of any person to be a member of any Council for the purpose of making laws and regulations or of any local authority shall continue to be so entitled as if this Act had not been passed.

Faculties and Syndicate.

Faculties.

14. (1) Nothing contained in the Act of Incorporation shall be deemed to prohibit the constitution of a new Faculty or the abolition or reconstitution of any existing Faculty by the Senate under regulations made in accordance with the provisions of this Act.

(2) Regulations made under sub-section (1) may—

(a) provide for the assignment of Fellows to the several Faculties by order of the Senate; and

(b) empower the Fellows so assigned to add to their number in such manner and for such period as may be prescribed, Graduates in the Faculty and other persons possessing special knowledge of the subjects of study represented by the Faculty:

Provided that the number of persons so to be added to the Faculty shall not exceed half the number of Fellows assigned to the Faculty.

(3) A person added to a Faculty under sub-section (2), clause (b), shall have the right to take part in the ordinary business of the Faculty, and in any election of an Ordinary Fellow by the Faculty, but shall not be entitled to take part in the election of the Syndicate.

Syndicate.

15. (1) The executive government of the University shall be vested in the Syndicate, which shall consist of—

(a) the Vice-Chancellor as Chairman;

(b) the Director of Public Instruction for the Province in which the head-quarters of the University are situated; and, in the case of the University of Allahabad, also the Director of Public Instruction in the Central Provinces; and

(c) not less than seven or more than fifteen *ex-officio* or Ordinary Fellows elected by the Senate or by the Faculties in such manner as may be provided by the regulations, to hold office for such period as may be prescribed by the regulations.

(2) The regulations referred to in sub-section (1) shall be so framed as to secure that a number, not falling short by more than one of a majority of the elected members of the Syndicate, shall be Heads of, or Professors in, Colleges affiliated to the University.

(3) If in the case of any election the question is raised whether any person is or is not a Professor within the meaning of sub-section (2), the question shall be decided by the Senate.

Degrees.

Degrees, diplomas, licenses, titles and marks of honour.

16. The Senate may institute and confer such degrees, and grant such diplomas, licenses, titles and marks of honour in respect of degrees and examinations as may be prescribed by regulation.

Honorary degrees.

17. Where the Vice-Chancellor and not less than two-thirds of the other members of the Syndicate recommend that an honorary degree be conferred on any person on the ground that he is, in their opinion, by reason of eminent position and attainments, a fit and proper person to receive such a degree, and where their recommendation is supported by not less than two-thirds of the Fellows present at a meeting of the Senate and is confirmed by the Chancellor, the Senate may confer on such person the honorary degree so recommended without requiring him to undergo any examination.

Cancellation of degrees and the like.

18. Where evidence is laid before the Syndicate showing that any person on whom a degree, diploma, license, title or mark of honour conferred or granted by the Senate has been convicted of what is, in their opinion, a serious offence, the Syndicate may propose to the Senate that the degree, diploma, license, title or mark of honour be cancelled, and, if the proposal is accepted by not less than two-thirds of the Fellows present at a meeting of the Senate and is confirmed by the Chancellor, the degree, diploma, license, title or mark of honour shall be cancelled accordingly.

Affiliated Colleges.

Certificate required of candidates for examination.

19. Save on the recommendation of the Syndicate, by special order of the Senate, and subject to any regulations made in this behalf, no person shall be admitted as a candidate at any University examination other than an examination for Matriculation, unless he produces a certificate from a College affiliated to the University, to the effect that he has completed the course of instruction prescribed by regulation.

Existing Colleges.

20. Any College affiliated to the University before the passing of this Act may continue to exercise the rights conferred upon it by such affiliation, save in so far as such rights may be withdrawn or restricted in the exercise of any power conferred by the Act of Incorporation or by this Act.

Affiliation.

21. (*1*) A College applying for affiliation to the University shall send a letter of application to the Registrar, and shall satisfy the Syndicate—

(*a*) that the College is to be under the management of a regularly-constituted governing body;

(*b*) that the qualifications of the teaching staff and the conditions governing their tenure of office are such as

to make due provision for the courses of instruction to be undertaken by the College;

(*c*) that the buildings in which the College is to be located are suitable, and that provision will be made, in conformity with the regulations, for the residence in the College, or in lodgings approved by the College, of students not residing with their parents or guardians, and for the supervision and physical welfare of students;

(*d*) that due provision has been or will be made for a library;

(*e*) where affiliation is sought in any branch of experimental science, that arrangements have been or will be made in conformity with the regulations for imparting instruction in that branch of science in a properly equipped laboratory or museum;

(*f*) that due provision will, so far as circumstances may permit, be made for the residence of the Head of the College and some members of the teaching staff in or near the College or the place provided for the residence of students;

(*g*) that the financial resources of the College are such as to make due provision for its continued maintenance;

(*h*) that the affiliation of the College, having regard to the provision made for students by other Colleges in the same neighbourhood, will not be injurious to the interests of education or discipline; and

(*i*) that the College rules fixing the fees (if any) to be paid by the students have not been so framed as to involve such competition with any existing College in the same neighbourhood as would be injurious to the interests of education.

The application shall further contain an assurance that, after the College is affiliated, any transference of management and all changes in the teaching staff shall be forthwith reported to the Syndicate.

(*2*) On receipt of a letter of application under sub-section (*1*), the Syndicate shall—

(*a*) direct a local inquiry to be made by a competent person authorized by the Syndicate in this behalf;

(*b*) make such further inquiry as may appear to them to be necessary; and

(*c*) report to the Senate on the question whether the application should be granted or refused, either in whole or in part, embodying in such report the results of any inquiry under clauses (*a*) and (*b*).

And the Senate shall, after such further inquiry (if any), as may appear to them to be necessary, record their opinion on the matter.

(3) The Registrar shall submit the application and all proceedings of the Syndicate and Senate relating thereto to the Government, who, after such further inquiry as may appear to them to be necessary, shall grant or refuse the application or any part thereof.

(4) Where the application or any part thereof is granted, the order of the Government shall specify the courses of instruction in respect of which the College is affiliated; and, where the application or any part thereof is refused, the grounds of such refusal shall be stated.

(5) An application under sub-section (1) may be withdrawn at any time before an order is made under sub-section (3).

Extension of affiliation.

22. Where a College desires to add to the courses of instruction in respect of which it is affiliated, the procedure prescribed by section 21 shall, so far as may be, be followed.

Inspection and report.

23. (1) Every College affiliated to the University, whether before or after the commencement of this Act, shall furnish such reports, returns and other information as the Syndicate may require to enable it to judge of the efficiency of the College.

(2) The Syndicate shall cause every such College to be inspected from time to time by one or more competent persons authorized by the Syndicate in this behalf.

(3) The Syndicate may call upon any College so inspected to take, within a specified period, such action as may appear to them to be necessary in respect of any of the matters referred to in section 21, sub-section (1).

Disaffiliation.

24. (1) A member of the Syndicate who intends to move that the rights conferred on any College by affiliation be withdrawn, in whole or in part, shall give notice of his motion, and shall state in writing the grounds on which the motion is made.

(2) Before taking the said motion into consideration, the Syndicate shall send a copy of the notice and written statement mentioned in sub-section (1) to the Head of the College concerned, together with an intimation that any representation in writing submitted within a period specified in such intimation on behalf of the College will be considered by the Syndicate:

Provided that the period so specified may, if necessary, be extended by the Syndicate.

(3) On receipt of the representation or on expiration of the period referred to in sub-secion (2), the Syndicate, after considering the notice of motion, statement and representation and after such inspection by any competent person authorized by the

Syndicate in this behalf, and such further inquiry as may appear to them to be necessary, shall make a report to the Senate.

(4) On receipt of the report under sub-section (3) the Senate shall, after such further inquiry (if any), as may appear to them to be necessary, record their opinion on the matter.

(5) The Registrar shall submit the proposal and all proceedings of the Syndicate and Senate relating thereto to the Government, who after such further inquiry (if any), as may appear to them to be necessary, shall make such order as the circumstances may, in their opinion, require.

(6) Where by an order made under sub-section (5) the rights conferred by affiliation are withdrawn, in whole or in part, the grounds for such withdrawal shall be stated in the order.

Regulations.

Regulations.

25. (1) The Senate, with the sanction of the Government, may from time to time make regulations consistent with the Act of Incorporation as amended by this Act and with this Act to provide for matters relating to the University.

(2) In particular, and without prejudice to the generality of the foregoing power such regulations may provide for—

(a) the procedure to be followed in holding any election of Ordinary Fellows;

(b) the constitution, reconstitution or abolition of Faculties, the proportion in which the members, other than the *ex-officio* members of the Syndicate, shall be elected to represent the various Faculties, and mode in which such election shall be conducted;

(c) the procedure at meetings of the Senate, Syndicate and Faculties and the quorum of members to be required for the transaction of business;

(d) the appointment of Fellows and others to be members of Boards of Studies, and the procedure of such Boards and the quorum of members to be required for the transaction of business;

(e) the appointment and duties of the Registrar and of officers and servants of the University, and of Professors and Lecturers appointed by the University;

(f) the appointment of Examiners, and the duties and powers of Examiners, in relation to the examinations of the University;

(g) the form of the certificate to be produced by a candidate for examination under section 19, and the condition on which any such certificate may be granted;

(h) the registers of Graduates and students to be kept by the University, and the fee (if any), to be paid for the entry or retention of a name on any such register;

(*i*) the inspection of Colleges and the reports, returns and other information to be furnished by Colleges;

(*j*) the registers of students to be kept by Colleges affiliated to the University;

(*k*) the rules to be observed and enforced by Colleges affiliated to the University in respect of the transfer of students;

(*l*) the fees to be paid in respect of the courses of instruction given by Professors or Lecturers appointed by the University;

(*m*) the residence and conduct of students;

(*n*) the courses of study to be followed and the conditions to be complied with by candidates for any University examination, other than an examination for Matriculation, and for degrees, diplomas, licenses, titles, marks of honours, scholarships and prizes conferred or granted by the University;

(*o*) the conditions to be complied with by schools desiring recognition for the purpose of sending up pupils as candidates for the Matriculation examination and the conditions to be complied with by candidates for Matriculation, whether sent up by recognised schools or not;

(*p*) the conditions to be complied with by candidates, not being students of any College affiliated to the University, for degrees, diplomas, license, titles, marks of honour, scholarships and prizes conferred or granted by the University; and

(*q*) the alteration or cancellation of any rule, regulation, statute or bye-law of the University in force at the commencement of this Act.

New body of regulations.

26. (*1*) Within one year after the commencement of this Act or within such further period as the Government may fix in this behalf—

(*a*) the Senate as constituted under this Act shall cause a revised body of regulations to be prepared and submitted for the sanction of the Government;

(*b*) if any additions to, or alterations in, the draft submitted appear to the Government to be necessary, the Government, after consulting the Senate, may sanction the proposed body of regulations, with such additions and alterations as appear to the Government to be necessary.

(*2*) Where a draft body of regulations is not submitted by the Senate within the period of one year after the commencement of this Act, or within such further period as may be fixed under sub-section (*1*), the Government may, within one year after the expiry of such period or of such further period, make

regulations which shall have the same force as if they had been prepared and sanctioned under sub-section (*1*).

Miscellaneous.

Territorial exercise of powers.

27. The Governor-General in Council may, by general or special order, define the territorial limits within which, and specify the Colleges in respect of which, any powers conferred by or under the Act of Incorporation or this Act shall be exercised.

* * * * * *

Repeals.

29. The Acts mentioned in the second schedule are hereby repealed to the extent specified in the fourth column thereof.

THE FIRST SCHEDULE.

(*Section 5.*)

Ex-Officio FELLOWS OF THE UNIVERSITY.

The University of Calcutta.

In supersession of all previous notifications on the subject, the Government of Bengal (Ministry of Education) is pleased to appoint the following to be *ex-officio* Fellows of the University of Calcutta under section 5, sub-section (*2*) of the Indian Universities Act, 1904 (VIII of 1904), as amended by Act VII of 1921:—

His Excellency the Governor of Assam, Shillong.

The Chief Justice of the High Court of Judicature at Fort William in Bengal.

Lord Bishop of Calcutta and Metropolitan of India.

The Member of the Council of the Governor-General in Charge of the Department of Education.

The Member of the Executive Council of the Government of Bengal or the Minister appointed by the Governor to be in Charge of the Department of Education.

The Minister for Education, Assam.

The Secretary to the Government of Bengal, Education Department.

The Director of Public Instruction, Bengal.

The Director of Public Instruction, Assam.

The Principal, Presidency College, Calcutta.

The University of Bombay.

The Chief Justice of the High Court of Judicature at Bombay.
The Bishop of Bombay.
The Ordinary Members of the Council of the Governor of Bombay.
The Director of Public Instruction in Bombay.

The University of Madras.

The Chief Justice of the High Court of Judicature at Madras.
The Bishop of Madras.
The Ordinary Members of the Council of the Governor of Madras.
The Director of Public Instruction in Madras.

The University of Punjab.

The Chief Judge of the Chief Court of the Punjab.
The Bishop of Lahore.
The Director of Public Instruction in the Punjab.
The representatives of such Chiefs (if any) of territories not comprised in British India as the Local Government may, by notification in local official Gazette, specify in this behalf.

The University of Allahabad.

The Chief Justice of the High Court of Judicature for the North-Western Provinces.
The Bishop of Lucknow.
The Directors of Public Instruction in the United Provinces of Agra and Oudh and in the Central Provinces.

THE SECOND SCHEDULE.

(Section 29.)

ENACTMENTS REPEALED.

Year.	No.	Short title.	Extent of repeal.
1857	II	The Calcutta University Act, 1857.	In section 2 the word "said" wherever it occurs. In section 3, the first sentence and the words "Provided that." In section 5, the words "in the Calcutta Gazette." Section 6. Section 8, except the first sentence. Sections 9, 10, 11, 12, 13 and 14.
1857	XXII	The Bombay University Act, 1857.	In section 2, the word "said" wherever it occurs. In section 3, the first sentence and the words "Provided that." Section 6. Section 8, except the first sentence. Sections 9, 10, 11, 12, 13 and 14.
1857	XXVII	The Madras University Act, 1857.	In section 2, the word "said" wherever it occurs. In section 3, the first sentence and the words "Provided that." Section 6. Section 8, except the first sentence. Sections 9, 10, 11, 12, 13 and 14.
1860	XLVII	The Indian Universities (Degrees) Act, 1860.	The whole Act.
1882	XIX	The Punjab University Act, 1882.	Section 6. In section 7, sub-section (*1*). In section 8, sub-section (*1*), the words after the word "Fellow" to the end of the sub-section; and in sub-section (*2*), the words from the word "appointed" to the words "this Act." In section 9, the words "under this Act." Sections 10 and 11. Section 12, except the last paragraph. Sections 13, 14, 15, 16 and 18. In section 20 the words "made or" "section six, clauses (*b*) and (*c*) and" and "under section fourteen, fifteen and sixteen." In the Schedule, Part I.

Year.	No.	Short title.	Extent of repeal.
1884	I	The Indian Universities (Honorary Degrees) Act, 1884.	The whole Act.
1887	XVIII	The Allahabad University Act, 1887.	Section 5. In section 6, sub section (*1*). In section 7, sub-section (*1*) and in sub-section (*2*), the words from the word, "Fellow" to the end of the sub-section. Sections 10, 11, 12, 13, 14, 15 and 17. In section 20, the words and figures "appointments made and" "under sectiion 5, sub-section (*1*), clauses (*b*) and (*c*)," "under sections, 14 and 15" and "under section 17." In the Schedule, Part I.

ACT NO. II OF 1905

PASSED BY THE GOVERNOR-GENERAL OF INDIA IN COUNCIL.

(Received the assent of the Governor-General on the 10th February, 1905.)

An Act to validate action taken under the Indian Universities Act, 1904.

Whereas the Indian Universities Act, 1904 (VIII of 1904), authorizes the Chancellor of each of the Indian Universities to make directions, declarations and orders with a view to the constitution of the Body Corporate and the appointment of the Provisional Syndicate thereof;

And whereas various directions, declarations and orders have been made in pursuance of the said authority, and Bodies Corporate and Provisional Syndicates have been constituted and appointed thereunder;

And whereas doubts have been raised as to the construction of the said Act and as to the validity of some of the said directions, declarations and orders and as to the validity of the constitution and appointment of some of the Bodies Corporate and Provisional Syndicates and it is expedient to remove such doubts;

It is hereby enacted as follows: —

Short Title.

1. This Act may be called the Indian Universities (Validation) Act, 1905.

Validation of directions, declarations and orders.

2. All directions, declarations and orders made as aforesaid shall be deemed to have been duly made under the Indian Universities Act, 1904 (VIII of 1904).

Validation of constitution and appointment of Bodies.

3. The Bodies Corporate and Provisional Syndicates constituted and appointed as aforesaid shall be deemed to have been duly constituted and appointed under the said Act.

ACT NO. XI OF 1911.

PASSED BY THE GOVERNOR-GENERAL OF INDIA IN COUNCIL.

(Received the assent of the Governor-General on the 21st March, 1911.)

An Act to amend the Indian Universities Act, 1904 (VIII of 1904).

Whereas it is expedient to amend the Indian Universities Act, 1904;

It is hereby enacted as follows:—

Short Title.

1. This Act may be called the Indian Universities (Amendment) Act, 1911.

2. To Section 6, Sub-Section (2), of the said Act the following proviso should be added, namely:—

Amendment of Section, 6, Act VIII of 1904.

"Provided that in the case of the University of Allahabad the Chancellor may direct that such number as he may specify of the Ordinary Fellows referred to in clause (*a*) shall be elected by the Senate and the remainder by registered Graduates."

ACT NO. VII OF 1921.

PASSED BY THE INDIAN LEGISLATIVE ASSEMBLY.

(Received the assent of the Governor-General on the 27th March, 1921.)

An act to amend the law relating to the Calcutta University.

Whereas it is expendient to amend the law relating to the Calcutta University; It is hereby enacted as follows:

Short Title.

1. This act may be called the Calcutta University Act, 1921.

II of 1857. Amendment of Section 4, Act II of 1857.

2. In Section 4 of the Calcutta University Act, 1857 (hereinafter referred to as the said Act), for the words "Governor-General of India," the words "Governor of the Presidency of Fort William in Bengal" shall be substituted.

Amendment of Sections 5, 7 and 15, Act II of 1857.

3. In Sections 5, 7 and 15 of the said Act, for the words "Governor-General of India in Council" in all places where they occur, the words "Local Government of Bengal" shall be substituted.

VIII of 1904. Repeal.

4. The Sections of Indian Universities Act, 1904, which are specified in the first column of the Schedule, are hereby repealed to the extent specified in the second column thereof.

THE SCHEDULE.

(SEE SECTION 4.)

1	2
Sec.	Extent of repeal.
2	In clause (b) of sub-section (2) the words "in relation to the University of Calcutta the Governor-General in Council, and in relation to the other Universities."
3	Clause (b) of sub-section (1)—the whole—and in sub-section (3) the words "or in the case of the University of Calcutta, upon the Chancellor, Rector, Vice-Chancellor and Fellows in their corporate capacity."
5	In sub-section (2) the words "in the Gazette of India or" and the words "as the case may be."
28	The whole.

NEW REGULATIONS

NEW REGULATIONS

CHAPTER I

THE SENATE

1. The Senate shall meet ordinarily once a year in the month of January and may meet at other times if convened by the Vice-Chancellor, or, in his absence from Calcutta, or when the office of Vice-Chancellor is vacant, by the Senior Ordinary Fellow present in Calcutta.

2. The *ex-officio* Fellows of the University are always the Senior Fellows in order of official precedence. The seniority of all Ordinary Fellows is according to the date and order of their first appointment under the Indian Universities Act, 1904.

3. The Vice-Chancellor, or, in his absence, or when the office of Vice-Chancellor is vacant, the Senior Ordinary Fellow present in Calcutta shall convene a meeting of the Senate on the requisition of any six Fellows

4. No question shall be brought under the consideration of the Senate which has not first been considered by the Syndicate.

5. Except in the case of urgent business, twelve clear days' notice shall be given of every meeting.

6. The Registrar shall, with notice, issue an agenda paper showing the business to be brought before the meeting, the terms of all resolutions to be proposed of which notice in writing has previously reached him, and the names of the proposers. Notices in writing of additional resolutions and of proposed amendments and the terms thereof should reach the Registrar four clear days before the day of such meeting.

7. The Registrar shall also, two clear days before the day of meeting, forward to each member of the Senate an agenda paper showing all the motions and amendments and any additional business proposed by the Syndicate; and no motion and, unless expressly sanctioned by a majority of the members present, no amendment, of which such notice has not been given, shall be put to the meeting, other than a motion for any change in the order of business, a motion for dissolution, or adjournment, or for putting the question to vote, or for passing to the next business on the agenda paper, or for directing the Syndicate to review their decision, or an amendment which may be accept-

ed by the Chairman as merely formal. The adjournment of a debate may, however, be moved for the purpose of giving notice of an amendment which has been disallowed.

8. Fifteen members of the Senate shall constitute a quorum, and all questions shall be decided by a majority of the votes of the members present.

9. The Chancellor, or, in his absence, the Vice-Chancellor shall preside at meetings of the Senate, or, if the Vice-Chancellor be not present, a Chairman for the occasion shall be elected by the members present. If the votes, including that of the Chairman, are equally divided, the Chairman shall have a casting vote.

Order of Business.

10. At the time appointed for the meeting, the Registrar shall take notice whether a quorum is present. If there is not, and if a quorum is not present within fifteen minutes, no meeting shall be held.

11. If at any time during the progress of business, any member shall call attention to the fact that there is not a quorum present, the meeting shall forthwith be dissolved. Such dissolutions shall be recorded by the Registrar under the signature of the Chairman.

12. At every meeting the business shall be taken in the following order:

(*i*) The election, if necessary, of the Chairman.
(*ii*) University appointments.
(*iii*) Any motion for a change in the order of business.
(*iv*) Matters brought forward by the Syndicate.
(*v*) Other business.

Rules of Debate.

(*i*) *Motions.*

13. Every motion shall be affirmative in form, and shall begin with the word 'that.'

14. Every motion at a meeting must be seconded; otherwise it shall drop.

15. When a motion has been seconded, it shall be stated from the Chair unless it be ruled out of order

16. When the motion has been thus stated, it may be discussed as a question to be resolved either in the affirmative or in the negative, or as proposed to be varied by way of amendment. When no Fellow rises to speak to the motion, the

Chairman shall proceed to put the question to the vote in the manner hereinafter mentioned.

17. Not more than one motion and one amendment thereto shall be placed before the meeting at the same time.

18. A motion once disposed of shall not be again brought forward at the same meeting, or at any adjournment thereof. A motion substantially identical in part with one already disposed of may be brought forward with the omission of such part.

(*ii*) *Amendments.*

19. Any proposal before the meeting may be amended (*a*) by leaving out a word or words; (*b*) by leaving out a word or words in order to add or insert some other word or words; (*c*) by adding or inserting a word or words.

When the amendment is of the first kind, the form in which it will be proposed and handed to the Chair will be, "That the words (mentioning them) be left out of the question."

When the amendment is of the second kind, the form will be, "That the words (mentioning them) be left out of the question, in order to add (or insert) the words (mentioning them)."

When the amendment is of the third kind, the form will be, "That the words (mentioning them) be added (or inserted)."

20. No amendment shall be proposed which would in effect constitute a direct negative to the original motion, or which would alter the first word.

21. Every amendment must be relevant to the motion upon which it is moved

22. No amendment shall be proposed which substantially raises a question already disposed of by the meeting, or which is inconsistent with any resolution already passed by it.

23. An amendment, the substance of which has been disposed of in part, may be modified by its proposer so as to retain only the part not so disposed of.

24. The order in which amendments of which previous notice has been given are to be brought forward shall be determined by the Chairman.

25. An amendment must be seconded in the same way as a motion; otherwise it shall drop. A seconder of an amendment may reserve his speech with the permission of the Chairman.

26. When an amendment has been moved and seconded it shall, unless ruled out of order, be stated from the Chair, and then the debate may proceed on the original motion and the amendment together.

27. When the Chairman has ascertained that no other Fellow entitled to address the meeting desires to speak, the

er of the original resolution may reply upon the whole ate. But the mover of an amendment, or of a motion for olution or adjournment, or of a motion to pass to the next ness on the agenda paper has no right of reply.

28. No Fellow shall speak to the question after the mover entered on his reply.

29. When the Debate is concluded the Chairman shall, summing up, if he so desires, put the question to the vote :

If there is no amendment, the Chairman shall say, " The tion is " and state the motion, and shall then take the votes le meeting.

If there is an amendment, the Chairman shall say, " It has moved " and shall state the motion; then he shall say ice which it has been moved by way of amendment."

(a) " that the following word or words be omitted " (if the amendment is one of the first kind);

(b) " that the following word or words be omitted, and that the following word or words be added or inserted," indicating where such words are to be added or inserted (if the amendment is of the second kind);

(c) " that the following word or words be added or inserted," mentioning where such word or words are proposed to be added or inserted (if the amendment is of the third kind).

The votes of the members present in the meeting shall then ken on the amendment by a show of hands

9A. After a motion or amendment thereto has been l and seconded, a motion 'That the question be now put' be moved at any time as a distinct question but not as endment, nor so as to interrupt a speech.

9B. After a member has moved 'That the question be put' the motion 'That the question be now put' shall be the vote forthwith and decided without amendment or , unless it shall appear to the Chairman that such a motion nfringement of the rights of reasonable debate.

9C. When the motion 'That the question be now put' has carried, the motion or amendment, the debate on which as been terminated, shall be put and decided without lment or further debate.

). If an amendment is negatived, the original motion shall ain stated from the Chair, and, subject to the foregoing ations, any other amendment which is in order may then posed thereto.

. If an amendment is carried, the motion as amended e stated from the Chair, and may then be debated as a

substantive question, to which the further amendments to the original motion which are in order and so far as they shall be applicable may be proposed, subject to the foregoing Regulations, and such further amendments shall be disposed of in the same manner as the original amendment.

(iii) Adjournments.

32. A motion "That this meeting be now dissolved" or "that this meeting be now adjourned to (some specified date and hour)" may be moved at any time as a distinct question, but not as an amendment, nor so as to interrupt a speech. If a motion for dissolution is carried, the business before the meeting shall drop. If a motion for adjournment is carried, the meeting shall be adjourned, and the business shall be resumed at the adjourned meeting.

33. A motion "That the debate be now adjourned to (some specified date and hour)" may be moved in the like manner, and if it be carried shall have the effect of postponing the debate on the question under consideration till the date and hour specified, and the other items on the agenda paper shall be proceeded with. If the motion be negatived, the debate shall be resumed.

34. No amendment shall be moved to a motion under either of the two last preceding Regulations, except one for substituting a different date and hour for that to which it is proposed to adjourn the meeting or debate, or a motion under Regulation 36.

35. A meeting or a debate renewed or continued after an adjournment is to be deemed one with that preceding the adjournment.

36. A motion "That the meeting pass to the next business on the agenda paper" may be made at any time, in like manner and subject to the same rules as one for adjournment. If such a motion be carried, the motion under consideration and the amendment thereon, if any, shall drop.

37. No motion for the dissolution or for the adjournment of the meeting, or for the adjournment of the debate, or to pass to the next business, shall, except by leave of the meeting, be moved or seconded by any Fellow who has spoken to the question then before the meeting, or who, during the discussion of such question, has already made one of the aforesaid motions. Any such motion shall take precedence of any question that may be before the meeting, and, if not withdrawn, must be disposed of before such question.

38. When a motion of the class contemplated in the last preceding Regulation has been brought forward and negatived, no other motion of that class shall be brought forward until after

mover of the original resolution may reply upon the whole debate. But the mover of an amendment, or of a motion for dissolution or adjournment, or of a motion to pass to the next business on the agenda paper has no right of reply.

28. No Fellow shall speak to the question after the mover has entered on his reply.

29. When the Debate is concluded the Chairman shall, after summing up, if he so desires, put the question to the vote thus:

If there is no amendment, the Chairman shall say, " The question is " and state the motion, and shall then take the votes of the meeting.

If there is an amendment, the Chairman shall say, " It has been moved " and shall state the motion; then he shall say " Since which it has been moved by way of amendment."

(a) " that the following word or words be omitted " (if the amendment is one of the first kind);

or (b) " that the following word or words be omitted, and that the following word or words be added or inserted," indicating where such words are to be added or inserted (if the amendment is of the second kind);

or (c) " that the following word or words be added or inserted," mentioning where such word or words are proposed to be added or inserted (if the amendment is of the third kind).

The votes of the members present in the meeting shall then be taken on the amendment by a show of hands.

29A. After a motion or amendment thereto has been moved and seconded, a motion 'That the question be now put' may be moved at any time as a distinct question but not as an amendment, nor so as to interrupt a speech.

29B. After a member has moved 'That the question be now put' the motion 'That the question be now put' shall be put to the vote forthwith and decided without amendment or debate, unless it shall appear to the Chairman that such a motion is an infringement of the rights of reasonable debate.

29C. When the motion 'That the question be now put' has been carried, the motion or amendment, the debate on which has thus been terminated, shall be put and decided without amendment or further debate.

30. If an amendment is negatived, the original motion shall be again stated from the Chair, and, subject to the foregoing Regulations, any other amendment which is in order may then be proposed thereto.

31. If an amendment is carried, the motion as amended shall be stated from the Chair, and may then be debated as a

substantive question, to which the further amendments to the original motion which are in order and so far as they shall be applicable may be proposed, subject to the foregoing Regulations, and such further amendments shall be disposed of in the same manner as the original amendment.

(iii) Adjournments.

32. A motion "That this meeting be now dissolved" or "that this meeting be now adjourned to (some specified date and hour)" may be moved at any time as a distinct question, but not as an amendment, nor so as to interrupt a speech. If a motion for dissolution is carried, the business before the meeting shall drop. If a motion for adjournment is carried, the meeting shall be adjourned, and the business shall be resumed at the adjourned meeting.

33. A motion "That the debate be now adjourned to (some specified date and hour)" may be moved in the like manner, and if it be carried shall have the effect of postponing the debate on the question under consideration till the date and hour specified, and the other items on the agenda paper shall be proceeded with. If the motion be negatived, the debate shall be resumed.

34. No amendment shall be moved to a motion under either of the two last preceding Regulations, except one for substituting a different date and hour for that to which it is proposed to adjourn the meeting or debate, or a motion under Regulation 36.

35. A meeting or a debate renewed or continued after an adjournment is to be deemed one with that preceding the adjournment.

36. A motion "That the meeting pass to the next business on the agenda paper" may be made at any time, in like manner and subject to the same rules as one for adjournment. If such a motion be carried, the motion under consideration and the amendment thereon, if any, shall drop.

37. No motion for the dissolution or for the adjournment of the meeting, or for the adjournment of the debate, or to pass to the next business, shall, except by leave of the meeting, be moved or seconded by any Fellow who has spoken to the question then before the meeting, or who, during the discussion of such question, has already made one of the aforesaid motions. Any such motion shall take precedence of any question that may be before the meeting, and, if not withdrawn, must be disposed of before such question.

38. When a motion of the class contemplated in the last preceding Regulation has been brought forward and negatived, no other motion of that class shall be brought forward until after

the lapse of what the Chairman shall deem a reasonable time; nor shall a debate be allowed on such second or subsequent motion except with the permission of the Chairman.

(iv) Miscellaneous.

39. The Fellow, who first rises to speak at the conclusion of a speech, has the right to be heard. When two or more Fellows rise to speak at the same time, the Chairman shall decide who shall speak first.

40. Except as hereinafter provided, a Fellow, who has spoken to a motion or amendment, is not at liberty to speak again to such motion or amendment.

41. In so far as the question raised by an amendment is one on which he has not yet spoken, any Fellow may speak to that question, though he has spoken to the original question or a previous amendment.

42. No Fellow, except with the permission of the meeting, shall speak for more than fifteen minutes when proposing a motion or amendment, or for more than ten minutes when seconding or speaking to a motion or amendment, or when replying.

43. It shall be open to the Senate under special circumstances and by a special vote to reduce the time limits specified in Regulation 42.

44. The Chairman may, at any stage in the proceedings at his own discretion or at the request of a Fellow, explain the scope and effect of the motion or amendment which is before the meeting. He may, also at the conclusion of a debate, sum up the debate if he so desires

45. Proposals relating to the conferring of Honorary Degrees, Votes of thanks, Messages of Congratulation or Condolence, Addresses, and other matters of a like nature, may be moved from the Chair.

46. If the Chairman desires to take an active part in a debate he shall vacate the chair until the vote on that debate shall have been taken. During such time the chair shall be taken by the senior Fellow present who has not already taken part in the debate and who waives his right to do so. The acting Chairman shall during the debate in question exercise all the ordinary rights of the Chairman.

47. Any Fellow may, with the permission of the Chairman, rise, even while another is speaking, to explain any expression used by himself which may have been misunderstood by the speaker, but he shall confine himself strictly to such explanation.

48. Any Fellow may call the Chairman's attention to a point of order even while another Fellow is addressing the meeting, but no speech shall be made on such point of order.

49. The Chairman shall be the sole judge on any point of order, and may call any Fellow to order, and may, if necessary, dissolve the meeting.

50. No motion or amendment shall be withdrawn from the decision of the meeting without its unanimous consent; but the consent shall be presumed if the mover states his wish to withdraw the motion or amendment, and the Chairman, after an interval during which no dissent is expressed, announces that it is withdrawn.

51. Any motion or amendment, standing in the name of a member who is absent from a meeting, or who declines to move it, may be brought forward by any other member.

(*v*) *Voting.*

52. On putting any question to the vote, the Chairman shall call for an indication of the opinion of the Senate by a show of hands in the affirmative and negative, and shall declare the result thereof according to his opinion.

53. Any six Fellows may then demand a division, except on a motion of the kind contemplated in Regulations 29A, 32, 33, and 36.

54. The Chairman shall thereupon give such directions for effecting the division as he shall consider expedient. The names of the gentlemen who vote for or against the motion, or decline to vote, shall be recorded.

55. If no division is demanded, any Fellow shall have the right to dissent and to have the fact of his dissent recorded, provided such dissent be announced as soon as the Chairman shall have declared the result of the voting.

COMMITTEES.

56. The Senate may, when it thinks fit, appoint a committee consisting of any number of its members, or it may resolve itself into a committee for the consideration of business duly brought before it.

57. A motion for the appointment of a committee, or for the resolution of the meeting into a committee, may be made by any member at any time, and without the notice required by Regulation 5.

58. A motion for the appointment of a committee must define the purpose for which the committee is to serve and the number of members to compose it. Amendments for enlarging or restricting the operations of a committee or for enlarging or restricting the number, may be made without previous notice. If the motion is carried, the member moving shall name the

(e) where affiliation is sought in any branch of experimental science, that arrangements have been or will be made, in conformity with the Regulations, for imparting instruction in that branch of science in a properly equipped laboratory or museum;

(f) that due provision will, so far as circumstances may permit, be made for the residence of the Head of the College and some members of the teaching staff in or near the College or the place provided for the residence of students;

(g) that the financial resources of the College are such as to make due provision for its continued maintenance;

(h) that the affiliation of the College, having regard to the provision made for students by other Colleges in the same neighbourhood, will not be injurious to the interests of education or discipline; and

(i) that the College rules fixing the fees (if any) to be paid by the students have not been so framed as to involve such competition with any existing College in the same neighbourhood as would be injurious to the interests of education.

The application shall further contain an assurance that after the College is affiliated any transference of management and all changes in the teaching staff shall be forthwith reported to the Syndicate.

The application shall also contain an assurance that, except with the special permission of the Syndicate, no College professor or lecturer will be allowed to lecture to a class or section of a class which has on its rolls more than 150 students, and if two classes are combined, the joint number on the rolls shall likewise not exceed 150.

If any application for special permission is made, the Syndicate in dealing with it shall have regard to—

(a) the nature of the subject;

(b) the structure of the lecture-room and its accommodation;

(c) the qualifications of the lecturer.

In the case of every application for affiliation of a College in any subject for the Examination of the degree of Master in the Faculty of Arts or of Science, a guarantee must be given that the course in which affiliation is sought will be adequately maintained for a period of at least four years.

Act VIII of 1904, Secs. 21 (2), (3) and (4).

7. On receipt of a letter of application the Syndicate shall—

(a) direct a local inquiry to be made by a competent person authorized by the Syndicate in this behalf;

(b) satisfy themselves that there is in the College building adequate accommodation both as regards the number of class-rooms, and the floor space and cubic space in each class-room;

(c) make such further inquiry as may appear to them to be necessary; and

(d) report to the Senate on the question whether the application should be granted or refused, either in whole or in part, embodying in such report the result of any inquiry under clauses (a), (b) and (c).

And the Senate shall after such further inquiry (if any) as may appear to them to be necessary, record their opinion on the matter.

The Registrar shall submit the application and all proceedings of the Syndicate and Senate relating thereto to the Government, who, after such further inquiry as may appear to them to be necessary, shall grant or refuse the application or any part thereof.

When the application or any part thereof is granted, the order of Government shall specify the courses of instruction in respect of which the College is affiliated; and when the application or any part thereof is refused, the grounds of such refusal shall be stated.

8. An application for affiliation may be withdrawn at any time before an order has been passed on the application by the Government.

Act VIII of 1904, Sec. 21 (5).

9. Where a College desires to add to the courses of instruction in respect of which it is affiliated, the procedure prescribed by Regulations 6 and 7 shall, so far as may be, be followed.

Act VIII of 1904, Sec. 22.

10. As a condition of the continuance of affiliation each affiliated College will be inspected from time to time by one or more competent persons authorised by the Syndicate in that behalf.

Act VIII of 1904, Sec. 23 (2).

11. The Syndicate may call upon any College so inspected to take, within a specified period, such action as may appear to them to be necessary in respect of any matter referred to in Regulation 6.

Act VIII of 1904, Sec. 23 (3).

12. The Senate may, on the recommendation of the Syndicate, submit, for the orders of the Government at any time, a proposal for the withdrawal of the privileges of affiliation from any College.

The procedure shall be as follows:—

(a) A member of the Syndicate who intends to move that the rights conferred on any College by affiliation be withdrawn, in whole or in part, shall give notice of his motion, and shall state in writing the grounds on which the motion is made.

Act VIII of 1904, Sec. 24 (1)-(6).

(b) Before taking the said motion into consideration, the Syndicate shall send a copy of the notice and written statement mentioned in (a) to the Head of the College concerned, together with an intimation that any representation in writing submitted within a period specified in such intimation on behalf of the College, will be considered by the Syndicate: Provided that the period so specified may, if necessary, be extended, from time to time, by the Syndicate.

(c) On receipt of the representation or on expiration of the period referred to in (b), the Syndicate, after considering the notice of motion, statement and representation, and after such inspection by any competent person authorized by the Syndicate in this behalf, and such further inquiry as may appear to them to be necessary, shall make a report to the Senate.

(d) On receipt of the report under (c), the Senate shall, after such further inquiry (if any) as may appear to them to be necessary, record their opinion on the matter.

(e) The Registrar shall submit the proposal and all proceedings of the Syndicate and Senate relating thereto to the Government, who, after such further inquiry (if any) as may appear to them to be necessary, shall make such order as the circumstances may, in their opinion, require.

(f) Where by an order made under (e) the rights conferred by affiliation are withdrawn, in whole or in part, the ground for such withdrawal shall be stated in the order.

13. If a College affiliated in any subjects for the M.A. or M.Sc. standard fails to maintain adequately for a period of four years the course in that subject, proceedings shall be taken, under the preceding section, to withdraw from the College the privileges of affiliation in that subject.

Act VIII of 1904, Sec. 23.

14. Each affiliated College shall furnish such returns, reports, and other information as the Syndicate may require to enable them to judge of the efficiency of the College.

CHAPTER XIX.

CONDITIONS TO BE FULFILLED BY COLLEGES AFFILIATED UNDER ACT II OF 1857.

Act VIII of 1904, Sec. 20.

1. Every College affiliated to the University before the passing of the Indian Universities Act, shall be entitled to exercise the rights conferred upon it by affiliation, till such rights are withdrawn or restricted in the exercise of any power conferred by that Act or by the Act of Incorporation.

For this purpose all Colleges affiliated up to the standard of the First Examination in Arts will be deemed qualified to impart instruction up to the standard of the Intermediate Examination in Arts, but not up to that of the Intermediate Examination in Science.

2. As soon as practicable, after the date on which these Regulations come into force, the Syndicate shall cause steps to be taken for the withdrawal of the rights conferred by affiliation from all Colleges situated beyond the territorial limits of the University as defined by the Governor-General in Council under section 27 of the Indian Universities Act.

For this purpose, the Syndicate shall ascertain wheher any such College is preparing students for any examination of this University; and the date on which the withdrawal of the rights conferred by affiliation will take effect as regards any particular College shall be so regulated as not to prejudice the right of any student to appear at the examination for which he is actually reading in that College.

Act VIII of 1904, Sec. 23 (1).

3 As soon as practicable after the date on which these Regulations come into force, the Registrar shall forward a copy thereof to the authorities of each affiliated College situated within the territorial limits of the University as defined by the Governor-General in Council under section 27 of the Indian Universities Act, and invite them to furnish, within three months (or such further time as may be prescribed in any case by the Syndicate), information upon the following points:—

(a) Whether the College is under the management of a regularly constituted governing body; if so, the names of its members and its constitution.
(b) The names and qualifications of the teaching staff together with copies of their testimonials, and the conditions governing their appointment and tenure of office.
(c) The size and situation of the College buildings, including the floor space and cubic space in each class-room.
(d) Provision, if any, made for the residence of such of the students as do not reside with their parents or guardians.
(e) Provision made for the residence of the Head of the College and of any member of the teaching staff, in or near the College or the place provided for the residence of the students.
(f) Provision made for the supervision and physical welfare of the students.
(g) Provision for a library, and the facilities given to students to make use of the library.

(*h*) The courses of study, the subjects taught, the routine of work, and the arrangements for exercises and for tutorial assistance.

(*i*) The courses of study which the College proposes to undertake in accordance with these Regulations, and the provision which will be made for such courses.

(*j*) Where the College proposes to undertake instruction in any branch of experimental Science, what arrangements will be made for imparting instruction in that branch of Science in a laboratory or museum, (*i*) by the delivery of lectures illustrated by experiments, and (*ii*) by enabling students to carry on practical work.

(*k*) The financial resources of the College.

(*l*) The College rules fixing the fees, if any.

4. If it appears in the case of any College that it has no regularly constituted governing body, or that it has a governing body upon which the teaching staff is not represented, the Syndicate shall call upon the chief controlling authority to place the College forthwith under the management of a regularly constituted governing body on which the teaching staff is represented.

5. The Syndicate shall obtain from each College an assurance—

(*a*) that any transference of management and all changes in the teaching staff will be forthwith reported to the Syndicate, and

(*b*) that from the beginning of the session following that in which these Regulations come into force, except with the special permission of the Syndicate, no Professor or Lecturer will be allowed to lecture to a class or section of a class which has on its rolls more than 150 students, and if two classes are combined the joint number on the rolls shall likewise not exceed 150.

6. The Syndicate shall cause each College referred to in Regulation 3, to be inspected in accordance with the Regulations framed in that behalf, and call upon the College inspected to take, within a specified period (which may be extended from time to time at the discretion of the Syndicate) such action as may appear to them to be necessary with a view to secure its efficiency.

Act VIII of 1904, Sec. 23 (3).

7. At the end of two years from the time when these Regulations come into force, the Syndicate shall submit to the Senate

a report upon the condition of each affiliated College with a recommendation as to the subjects and standard in which such College shall be deemed to be affiliated. The matter shall be dealt with in accordance with the provisions of section 24 of the Indian Universities Act, and a report submitted to the Government, who may make such order as the circumstances of each case may require.

8. Each affiliated College shall furnish such returns, reports and other information as the Syndicate may require to enable them to judge of the efficiency of the College.

9. The preceding Regulations shall not apply to the School departments of affiliated Colleges.

CHAPTER XX.

INSPECTION OF AFFILIATED COLLEGES.

1. The inspection of Colleges shall be conducted jointly by the Inspector of Colleges and by one or two other persons who shall, from time to time, be appointed by the Syndicate to assist in the inspection of a College or a group of Colleges.

In the case of inspection of Colleges affiliated in Arts or Science, the additional Inspector or Inspectors shall be so chosen that both branches of study are represented, if necessary. In the case of Colleges affiliated in any branch of professional learning, the additional Inspector or Inspectors shall be specially qualified in that subject.

2. All Colleges shall be inspected once within eighteen months after the date when these Regulations come into operation. Thereafter every College shall be inspected at least once a year.

3. The report of the Inspectors shall deal with the following among other matters:—

(*a*) The constitution of the Governing Body and the names of its members.

(*b*) The suitability of the buildings and their neighbourhood, the accommodation for the students in attendance, the furniture, the lighting, the ventilation of the rooms, the drainage of the surrounding premises and the efficiency of the sanitary arrangements.

(*c*) The names and qualifications of the teaching staff, the conditions governing their appointment and tenure

of office, and the changes in the staff during the preceding year.

(*d*) The provision made for the residence of the Head of the College and of the members of the teaching staff, in or near the College, or the place provided for the residence of students.

(*e*) The adequacy of the Library, scientific apparatus, and other teaching appliances.

(*f*) The courses of study, the subjects taught, the number of lectures delivered in each subject, the routine of work and the arrangements for exercises and for tutorial assistance, and the facilities given to students to make use of the Library.

(*g*) The adequacy of the teaching staff.

(*h*) The strictness with which the College registers are kept and the transfer rules observed.

(*i*) The average monthly roll-number and the daily attendance of students during the last twelve months, as compared with the previous years.

(*j*) The results of University examinations.

(*k*) The state of discipline.

(*l*) The provision made for physical exercise.

(*m*) College clubs and other institutions for fostering Collegiate life.

(*n*) The extent and character of hostel accommodation, the degree of efficiency attained in the supervision of hostels and other lodgings for students; and the distance of such hostels and lodgings from the College premises.

4. The following books shall be kept by every College:—

(*a*) An admission register, in such form as the Syndicate may from time to time prescribe.

(*b*) An attendance register.

(*c*) A student's conduct register showing fines exacted and other punishments.

(*d*) A register of the results of periodical examinations and class exercises.

(*e*) A register of Transfer Certificates issued and received.

(*f*) A cash-book.

(*g*) A book containing the proceedings of the Governing Body.

5. All the accounts, books, and other records of a College shall at all times be open to inspection and examination by any person or persons who may be deputed by the Syndicate for the purpose, provided that any information obtained from the inspection of the accounts shall be deemed confidential.

6. No inspection or examination under these Regulations shall have reference to religious instruction.

7. Every College shall furnish annually a return in such form as the Syndicate may from time to time prescribe.

CHAPTER XXI.

RECOGNITION OF SCHOOLS AND WITHDRAWAL THEREOF.

1. A school situated within the local limits assigned to the University of Calcutta by the Governor-General in Council under section 27 of the Indian Universities Act, 1904, which is desirous of being recognised as a school competent to present candidates for the Matriculation Examination shall send a letter of application to the Registrar.

2. The school shall furnish a preliminary statement showing—

(*a*) That the school is under the management of a regularly constituted committee on which the teaching staff is represented, that proper provision is made for the continuance of the existence of such committee, and that the rules are such that the committee can exercise a necessary amount of control over the working of the school.

(*b*) That the qualifications, character and experience of the Head Master and the rest of the teaching staff are satisfactory, that due provision is made in respect of the number of teachers, and otherwise for carrying on all the courses of instruction in which the school desires to be recognised by the University as competent to present candidates for the Matriculation Examination, and that the conditions governing the tenure of the office of the Head Master and his staff are such as to render proper continuity of work possible.

(*c*) That the buildings in which the school is carried on are adapted for the purposes of a school and are in proper sanitary condition, that the surroundings are suitable, and that the arrangements made in the buildings and in the furnishing of them are not likely to injure in any way the eyesight and general health of the pupils.

(*d*) That the accommodation is sufficient for the classes under instruction in the school.

(*e*) That the sanitary conveniences attached to the school are adequate and are kept in good order.

(*f*) That arrangements are made for the supply of good drinking water to the pupils, and that facilities are provided to allow them to partake of refreshments.

(g) That due provision is made for the maintenance of a library and for lending out appropriate books (not school text books) for the use of pupils.

(h) That when recognition is sought in any branch of work, such as experimental science (1) which involves lectures which should be experimentally illustrated or (2) which involves the students themselves doing practical experimental work, the apparatus and the facilities provided for the purpose are sufficient to carry out these objects properly and fully.

(i) That when any subject proposed to be taught requires for its proper understanding to be illustrated by special appliances, *e.g.*, the subject of Geography by maps and models, and the science subjects by a collection of objects or collections in the form of a museum, such provision has been made.

(j) That the school authorities have made provision to ensure discipline and good conduct among the pupils, both within and without the school premises, and that there are suitable arrangements for their recreation.

(k) That when pupils are not resident with either parents or guardians, the school authorities will insist on such students living either in a hostel or a mess which is duly inspected and placed under the control of some person responsible to the Head Master of the school for the discipline and well-being of such pupils.

(l) That no teacher is allowed to teach—

(i) in the Entrance Class or Second Class or any section thereof, more than 50 pupils at the same time;

(ii) in any of the classes from Third to the Sixth, or any section thereof, more than 40 pupils at the same time;

(iii) in either the Seventh or Eigth Class, or any section thereof, more than 30 pupils at the same time.

3. The Syndicate shall also require full information as to the financial position of the school and must be satisfied that its financial stability is assured. Information obtained on this head shall not be published.

4. The Syndicate shall also require full information as to the reasons for the establishment of the school, and as to the number of schools of the same standard which exist in the neighbourhood of the proposed school, and it must be shown that the establishment and recognition of the school will not be injurious to the interests of education and discipline.

5. The Syndicate shall also require full information as to the fees, if any, which it is proposed to levy in the school.

6. The Syndicate shall require a school, as a condition of its recognition, to send in to the University once in each year,

at such time as the Syndicate may prescribe, a short general report of the working of the school, together with a list of the staff of the school, and of any changes which may have taken place in the staff in the course of the preceding year.

The Syndicate shall also require that at the same time an abstract of the actual annual income and expenditure of the school shall be submitted, and shall insist that the remuneration of the teachers shall be on a reasonable scale and that the other expenditure shall be sufficient to maintain the school in efficiency.

The Syndicate shall also obtain an assurance that any transference of management and all changes in the teaching staff will be forthwith reported to the Syndicate.

7. On receipt of the letter of application for recognition, and of all such information as the Syndicate may consider to be necessary to establish a presumptive claim for the recognition of the school, the Syndicate shall call for a report on the points dealt with in Regulations 2-5 inclusive from a competent Inspector, and for this purpose the personal report of the Government Inspector of Schools of the Division in which the school is situated shall usually be considered to be sufficient.

This shall not, however, prevent the Syndicate from calling for special reports by any properly qualified person or persons on any or all of the foregoing points.

Should the person deputed be an Inspector of Schools, his report shall ordinarily be submitted through the Director of Public Instruction of the Province in which the school is situated with such remarks as the Director thinks it necessary to make.

8. On receipt of all the required information, the Syndicate shall decide whether the school shall be recognised or not, and if recognised, the exact courses in which such school may submit candidates for the Matriculation Examination shall be stated in the letter of recognition. If a recognised school desires to add to the courses of instruction in respect of which it is recognised, the procedure described in Regulations 2-7 shall so far as may be necessary, be followed.

9. One of the conditions of recognition, or of the continuance of recognition of a school already recognised, shall be that it shall submit to periodic inspection by a person or persons deputed by the Syndicate from time to time. It is desirable that such inspection take place at least once in each school year, and that copies of the inspection reports should be duly communicated to the University by the person or persons so deputed after each such inspection.

10. It shall be competent to the Syndicate at any time to withdraw the privilege of recognition granted under these Regu-

lations or granted under any rules previously in existence, for any one of the following reasons:—

(*a*) If a school on an average of three years fails to pass 33 per cent. of the candidates sent up for the Matriculation Examination.

(*b*) If the reports of inspections received show that the school is no longer worthy of recognition.

(*c*) If it is found that the conditions which were considered essential to the recognition of the school in the first instance and which obtained when the school was placed on the University list are no longer fulfilled.

(*d*) For any other reason considered to be sufficient by the Syndicate, the reason to be specified and recorded.

No action shall be taken on (*b*), (*c*) or (*d*), of Regulation 10 without giving the School Committee an opportunity of stating its own case.

In reference to (*a*) the following procedure shall be adopted:

(*i*) In each year, immediately after the results of the Matriculation Examination have been published, the Registrar shall prepare a list of the schools which on the average of the three preceding examinations (including that just ended) have failed to pass 33 per cent. of the candidates sent up for examination.

(*ii*) Such schools shall be warned before the end of July, that if they continue in future years to show unsatisfactory results, their names will be struck off the list of recognised schools.

(*iii*) In the year following such warning, if it is found, after the results of the Matriculation Examination have been declared, that any of the warned schools has again passed less than 33 per cent. of the candidates sent up, the privilege of sending up candidates to the Matriculation Examination shall be liable to be withdrawn from it. In this case notice of withdrawal of the privilege shall be issued by the Registrar not later than the 15th of July of each year, and shall take effect after the Matriculation Examination next following.

(*iv*) If, on the results of the fourth year so considered, the percentage of passes in any such warned school amounts to 33 per cent. no action shall be taken.

CHAPTER XXII.

CONDITIONS TO BE FULFILLED BY SCHOOLS NOW RECOGNISED.

1. Every school recognised by the University, at the time when these Regulations come into force, shall be entitled to exercise the rights conferred by recognition, till the privileges of recognition are withdrawn in the manner provided in Regulation 10 of Chapter XXI.

For this purpose, every school recognised as qualified to present candidates for the Entrance Examination shall be deemed qualified to present candidates for the Matriculation Examination in all subjects other than Geography and Elementary Mechanics, but no such school shall, without the special permission of the Syndicate, send up candidates for examination in either of these subjects.

If an application for special permission to take up either of these subjects is made, the Syndicate, before granting it, shall satisfy themselves that the school is provided with the necessary appliances and can make proper arrangements for teaching that subject.

2. As soon as practicable after the date on which these Regulations come into force, the Syndicate shall withdraw the privileges of recognition from all recognised schools situated beyond the territorial limits of the University as defined by the Governor-General in Council under section 27 of the Indian Universities Act. Such withdrawal shall take effect from a specified date not later than the 30th of April, 1907.

3. As soon as practicable after the date on which these Regulations come into force, the Registrar shall forward a copy thereof to the authorities of each recognised school situated within the territorial limits of the University as defined by the Governor-General in Council under section 27 of the Indian Universities Act, and invite them to furnish within three months (or such further time as may be prescribed in any case by the Syndicate), information upon the following points:—

(a) Whether the school is under the management of a regularly constituted committee, on which the teaching staff is represented; whether proper provision is made for the continuance of the existence of such committee, and whether the rules are such that the committee can exercise a necessary amount of control over the working of the school.

(b) Whether the qualifications, character and experience of the Head Master and the rest of the teaching

staff are satisfactory, whether due provision is made in respect of the number of teachers and otherwise for carrying on all the courses of instruction in which the school is recognised, and whether the conditions governing the appointment and tenure of office of the Head Master and the rest of the staff are such as to render proper continuity of work possible.

(*c*) Whether the buildings in which the school is situated and in which the instruction is carried on are adapted for the purposes of a school, and are in proper sanitary condition; whether the surroundings are suitable and the arrangements made in the buildings and in the furnishing of them are likely to injure in any way the eyesight and general health of the pupils.

(*d*) Whether the accommodation is sufficient for the classes under instruction in the school.

(*e*) Whether the sanitary conveniences attached to the school are adequate and kept in good order.

(*f*) Whether arrangements are made for the supply of good drinking water to the pupils, and facilities are provided to allow them to partake of refreshments.

(*g*) Whether provision is made for the maintenance of a library and for lending out appropriate books (not school text-books) for the use of students.

(*h*) Whether the school intends to undertake instruction in Geography or Elementary Mechanics; if so, whether the appliances and facilities provided are adequate.

(*i*) Whether provision is made to ensure discipline and good conduct among the pupils, both within and without the school premises, and whether arrangements are made for their recreation.

(*j*) Whether in the case of pupils who do not reside with parents or guardians, provision is made for their residence in lodgings inspected by and under the control of some person responsible to the Head Master for the discipline and well-being of such pupils.

(*k*) Whether the remuneration of the teachers is on a reasonable scale.

(*l*) The financial resources of the school, and actual annual income and expenditure for the last three years.

(*m*) The fees, if any, levied in the different classes of the school.

(*n*) The courses of study, the subjects taught, the routine of work, and the arrangements for exercises and for tutorial assistance.

4. If it appears in the case of any school that it has no regularly-constituted committee, or that it has a committee upon which the teaching staff is not represented, the Syndicate shall call upon the chief controlling authority to place the school forthwith under the management of a regularly-constituted committee on which the teaching staff is represented.

5. The Syndicate shall obtain from each school an assurance—

(*a*) that any transference of management and all changes in the teaching staff will be forthwith reported to the Syndicate,

(*b*) that after the expiry of twelve months from the date on which a copy of these Regulations is forwarded to the chief controlling authority of the school, no teacher will be allowed to teach

(*i*) in the Entrance Class or Second Class or any section thereof, more than 50 pupils at the same time;

(*ii*) in any of the classes from the Third to the Sixth, or any section thereof, more than 40 pupils at the same time;

(*iii*) in either the Seventh or the Eighth Class, or any section thereof, more than 30 pupils at the same time;

(*c*) that as a condition of the continuance of recognition, the school will submit to regular and periodic inspection by a person or persons deputed by the Syndicate from time to time, and

(*d*) that a short general report of the working of the school together with an abstract of its actual annual income and expenditure will be submitted once a year at such time as the Syndicate may prescribe.

6. The Syndicate shall call upon each school referred to in Regulation 3 to take within a specified period (which may be extended from time to time at the discretion of the Syndicate) such action in respect of any of the matters mentioned in Regulations 3, 4 and 5, as may appear to them to be essential for its efficiency. Upon failure of the school to take the necessary action, after it has been given reasonable opportunity to do so, it shall be liable to have the privileges of recognition restricted or withdrawn, as the circumstances of the case may require. No order, however, shall be made by the Syndicate in this behalf except upon a personal report on the condition of the school at the time, by a competent person deputed for the pur-

pose, and after giving the School Committee an opportunity of stating its own case.

7. The preceding Regulations shall apply to the School Departments of Affiliated Colleges.

CHAPTER XXIII.

ADMISSION, TRANSFER AND WITHDRAWAL OF STUDENTS.

1. These Regulations shall apply only to Colleges affiliated in Arts, Science and Law.

2. At their Annual Meeting the Senate shall appoint a Committee of five Fellows, to be called the Transfer Committee, who shall deal with all questions referred to them in accordance with the following Regulations.

Two members of the Committee and two only shall be persons not connected with any affiliated College.

The proceedings of the Committee shall be submitted every month to the Syndicate for confirmation, and the Syndicate may approve, revise or modify the decision of the Committee on any matter, or direct the Committee to review it. Three members shall form a quorum. In the event of a vacancy occurring between two Annual Meetings of the Senate it shall be at once filled up by the Syndicate.

Admissions.

3. Admission of students to Affiliated Colleges shall ordinarily be allowed only at the commencement of an academical year. If a student applies to a College for admission more than three weeks after the opening of that College in any academical year, his case, unless he brings a Transfer Certificate, shall be referred to the Transfer Committee for decision as to whether he may be permitted to join such College.

4. If a student, who has passed the Matriculation, or the Intermediate in Arts or Science or the B.A. or B.Sc. Examination. applies for admission to a College, without having previously joined any other College, he may be admitted upon production of his University certificate A student whose name appears in the gazetted list of candidates who have passed one of the aforesaid University examinations may be provisionally admit-

ted without a certificate, on condition of his producing the certificate within a reasonable time.

5. If a student has been sent up to a University examination, and has either not appeared, or has failed at such examination, he may, on production of the Registrar's receipt, be admitted to any College. The fact of his admission, with the date, shall be written across the face of the receipt.

6. If a student has failed, he shall produce a certificate showing the subject or subjects in which he has failed, which certificate the Registrar shall be bound to furnish within two days after payment of a fee of four annas.

7. A student will be recognised as admitted to a College as soon as he has been accepted by the Principal, and has, where fees are required by the College, paid his admission and first month's fee.

8 When a student has been admitted to an affiliated College, he shall be considered to belong to that College until—

(a) the end of the academical year in which he has been sent up to a University Examination, or
(b) the date borne on his Transfer or Withdrawal Certificate, or
(c) he has given notice of withdrawal, or
(d) his name has been struck off the College books for absence without notice or for non-payment of College fees, or
(e) he has been expelled.

Transfers.

9. If a student has once been admitted to an affiliated College under Regulation 4 or Regulation 5, he shall not, except as otherwise provided, be subsequently admitted to any other affiliated College, without the production of a Transfer Certificate from the Principal of the College in which he has last been reading.

10. When a student has been admitted into a College, he shall not ordinarily be allowed to take a transfer to any other College except at the end of an academical year.

11 Application for a Transfer Certificate must be made by letter to the Principal of the College. It must be signed by the applicant and countersigned by the applicant's parent or guardian.

12. If application is made at the close of an academical year, the only ground on which it can be refused is the failure

to pay the sums due to the College, including tuition fees, and fines and transfer fee, if any. If it is so refused the ground of refusal shall be notified in writing to the applicant, who shall have the right of appeal to the Transfer Committee.

13. If a student applies for transfer, against whose name "gross misconduct" has been entered in the University Register of students, this fact shall be noted in his Transfer Certificate.

14. If a student applies for transfer at any time other than at the end of an academical year on the ground of (1) transfer of his parent or guardian from the station at which the first College is situated, or (2) desirability of a change of climate and station on the ground of health, duly certified by proper medical evidence, or (3) any other good and sufficient reason, the Principal may grant him a transfer. If the Principal is of opinion that the application for transfer ought not to be granted, he shall, if the student so desires, at once refer the case to the Transfer Committee, stating his grounds of objection.

15. Transfer Certificates under the previous Regulation shall only be issued once a month, except in cases of urgency. The ordinary date of issue shall be the last day of the month, or if this day falls within a vacation or on a holiday, the next preceding working day.

16. A student desiring a Transfer Certificate under Regulation 14, shall submit his application not less than ten days before the authorised date of issue. Not less than three days before the latter date he shall be informed whether his application has been granted, and in that case he shall be furnished with a statement of all the sums due by him to the College. If these dues are paid by him on or before the authorised date of issue, he shall receive his Transfer Certificate on that date.

17. If, owing to the intervention of holidays or some unforeseen contingency, it is found impossible, in accordance with the conditions laid down, to issue the certificate on the last day of the month or the next preceding working day, the certificate shall be issued as soon after as possible, the same notice as specified above being given to the applicant with regard to the sums due by him. The date borne on the Transfer Certificate shall be that of the last day of the month for which the transfer is desired, except in cases of urgency, where the date of the certificate shall be the date of issue.

18. If the student does not pay the sums due by him within the time specified above, he shall not be entitled to his Transfer Certificate until the last day of the month in which he pays his dues, or the corresponding day preceding a vacation or holiday.

19. If application is made for a Transfer Certificate after the commencement of a vacation exceeding fifteen days and extending beyond the last day of the month in which it commences, the certificate, if granted, shall bear the date of the last day of such vacation if this coincides with the last day of a month; otherwise, it shall bear the date of the last day of the preceding month. The student applying for transfer shall submit his application at least six days before and shall receive his certificate, if granted, not later than five days after the end of the vacation. He shall, before the issue of the certificate, receive at least three days' intimation of the sums due by him to the College from which he desires transfer, and if these dues are not paid within this time the issue of the certificate shall be deferred in accordance with Regulation 18.

20. All fees for the month, corresponding to the date borne on the Transfer Certificate, shall be paid to the College from which the transfer is taken, and fees shall likewise be paid to the same College for an additional month if the application for transfer is made before a vacation which commences not more than one month after, and which extends more than one month beyond the date on the certificate. The fact of the payment of such additional fees shall be duly entered on the certificate, and unless a student takes admission to another College within a month of the date of his Transfer Certificate he shall not be liable to pay these fees at the second College.

21. In all cases, a student shall remain on the books of the College from which he seeks a transfer until the date borne on the Transfer Certificate, and his attendance at lectures shall be reckoned up to and including that date.

22. The Transfer Certificate shall be in such form as the Syndicate may, from time to time, prescribe.

23. A student shall be liable to pay a transfer fee before obtaining his certificate. The transfer fee shall not (except under special orders of the Transfer Committee in the case of Colleges in which no fees are charged) exceed the ordinary monthly fee of the class.

24. If a student applies for transfer who has failed to submit the exercises required of him, or to give satisfaction at the periodical examinations, the fact shall be noted on the Transfer Certificate.

25. If a student applies for transfer who has been refused permission to appear at a University Examination, the fact of such refusal, with the reasons, shall be noted on the Transfer Certificate.

26. If a student applies for transfer who has not been permitted to continue his studies in the College owing to his non-

appearance or failure at the College examinations, or who has not been allowed promotion, the fact shall be noted on the Transfer Certificate, and he shall not be admitted into a higher class in another College within twelve months.

Leaving Certificate.

27. A student temporarily or permanently ceasing his studies may claim a Leaving Certificate, which shall be in the same form as a Transfer Certificate, and for which the same fee, if any, shall be paid.

28. The Principal of a College may accept a Leaving Certificate in lieu of a Transfer Certificate in a session subsequent to that in which it was issued, but not in the same session. Such Certificate shall be presented at the beginning of the session, and the student shall ordinarily read from the beginning for the full academical year. But by special leave of the Syndicate the lectures in the College then entered may be reckoned from the day and month corresponding to the date on which the student's connection with his former College ceased.

29. The only grounds on which a Leaving Certificate can be refused are (1) gross misconduct, (2) failure to pay the sums due to the College.

30. If a student gives notice of withdrawal from a College without applying for a Leaving Certificate, he shall only be charged fees up to the end of the month in which he gives such notice.

Absence without Notice.

31. If a student is absent without notice for more than one month, his name may be struck off the books, in which case he shall be liable to pay fees for one month subsequent to that in which he last attended the lectures.

32. If a student, who has been absent without notice for more than one month, applies for a Leaving Certificate, the Principal may, at his discretion, grant such certificate, and may date the student's withdrawal from the day on which he last attended the lectures.

Expulsion and Rustication.

33. A Principal may for breach of College discipline—

(1) suspend a student for one month or less;
(2) rusticate a student for any period exceeding one month and not exceeding the remainder of the academical year; or
(3) expel a student.

In the second and third cases the matter shall be reported by the Principal to the Syndicate, in the form of a brief statement, including the date of rustication or expulsion.

34. If a student who has been so rusticated or expelled desires to continue his studies in some other College, he may apply to the Syndicate, who shall, after consideration of the circumstances, issue such orders as they may think proper: Provided that no order shall issue permitting such student to continue his studies in another College without a reference to the Principal of the College from which the student has been rusticated or expelled.

Miscellaneous.

35. A student before being sent up to a University Examination shall be required to pay all sums due to the College in which he has been reading, including fees up to the end of the academical year.

36. Any instance of alleged "gross misconduct" on the part of a student when not followed by expulsion or rustication, must be at once notified by the Principal of the College to the Transfer Committee, together with a statement by the student. The Transfer Committee shall determine whether the case shall be recorded in the University Register of students as one of "gross misconduct." Unless it is so recorded no future action taken on it by the Principal shall be recognised by the University.

37. Wilful transgression or colourable evasion of any of the foregoing rules shall be reported to the Syndicate.

38. All questions arising between one Principal and another respecting the interpretation of these rules, shall be referred as soon as possible to the Transfer Committee.

39. The academical year for the purpose of these Regulations shall be taken to commence on the 1st of June in one year and to end on the 31st of May in the next.

The Syndicate may alter these limits, if necessary.

CHAPTER XXIV.

RESIDENCE OF STUDENTS.

1. Every student reading in an Affiliated College with the object of appearing at a University Examination, who does not reside with his parents or other legal guardian, or guardian approved by the Principal of his College, shall reside either in his College or in lodgings approved by his College.

Act VIII of 1904, sec. 21 (c).

Any student making a false declaration in respect of the guardianship under which he is living, shall be punished by the Principal of his College, who will deal with the offence as occasion requires.

2. A student shall be held to be residing in a College, if he resides in a Collegiate Hostel as defined under Regulation 7.

3. The following classes of lodging may be approved by a College:—

(a) Non-Collegiate Hostels, that is, hostels under external management.
(b) Messes attached or unattached.
(c) Private lodgings.

4. At the Annual Meeting of the Senate a Committee of six Fellows, not less than three of whom must be Indians, shall be appointed to deal in accordance with these Regulations with questions relating to the residence of students in non-collegiate hostels, messes and private lodgings.

5. This Committee shall be called the Students' Residence Committee. The proceedings of the Committee shall be submitted every month to the Syndicate for confirmation, and the Syndicate may approve, revise or modify the decision of the Committee on any matter, or direct the Committee to review it.

Four members shall form a quorum.

In the event of a vacancy occurring in the course of the year it shall be at once filled up by the Syndicate.

6. Nothing in these Regulations shall be taken to authorise the Students' Residence Committee or any member thereof to interfere with the internal management of a hostel or mess, or with the control of a Principal over his students. But if the Committee is satisfied, upon the report of one or more of its members, or of an Inspector, that a hostel or mess is maintained or conducted in a manner contravening these Regulations, the Committee shall report the matter to the Syndicate.

Collegiate Hostels.

7. A Collegiate Hostel is a Boarding House for students which is under the direct and exclusive control of one College, which is regarded as an integral part of that College, and which admits only those students who are reading in that particular College.

8. The management of a Collegiate Hostel shall be entirely in the hands of the Governing Body of the College to which it belongs. There shall be in every such Hostel a Resident Superintendent, and, if necessary, one or more Assistant Superintendents.

9. The Principal of the College concerned shall frame rules for his Collegiate Hostel, but in the case of every such hostel, the following practices shall be observed:—

(*a*) Only male servants shall be employed.

(*b*) A roll shall be called both morning and evening.

(*c*) Without the special permission of the Superintendent, which shall be recorded in a book kept for the purpose, no student shall absent himself from the Hostel between 9 P.M. and 6 A.M.

(*d*) The Superintendent shall keep a Gate Book in which he shall enter the name of any student who returns to the Hostel between the above hours; he shall also enter his remarks against each case.

10. Every Collegiate Hostel shall be inspected once a year by the Inspector of Colleges.

11. Students shall have no right of appeal to the Syndicate against the orders of the Governing Body upon questions of internal discipline.

A student cannot be expelled from a Collegiate Hostel without being also expelled from the College to which it belongs, but he may be transferred to other lodgings under the control of the Principal.

Non-Collegiate Hostels.

12. A Non-Collegiate Hostel is a Boarding House for students, under external management. A Non-Collegiate Hostel shall not be recognised unless the individual or individuals responsible for the finances of such Hostel can give reasonable guarantee for its continued maintenance. Such Hostels may admit only the following classes of boarders:—

(1) Students of any Affiliated College;

(2) Tutors of such students;

(3) School boys reading in recognised schools who are nearly related to students residing in such hostels, and whose parents or guardians desire them to live with or under the direct supervision of such students.

Boarders belonging to classes (2) and (3) shall not be admitted without the sanction of the Students' Residence Committee.

13. Every Non-Collegiate Hostel shall be (*a*) under the supervision of a Manager, and (*b*) under the general control of a Visiting Committee, both approved by the Students' Residence Committee. The Visiting Committee shall be composed of three persons, of whom at least two shall be representatives of the College or Colleges concerned.

14. All Non-Collegiate Hostels shall be open to inspection by the Students' Residence Committee and by any duly appointed University Inspector. Every such hostel shall keep an Inspection Book in which the inspecting authorities may enter remarks.

15. There shall be in every such hostel a properly qualified Resident Superintendent, and, if necessary, one or more Assistant Superintendents.

16. The conditions laid down under Regulation 9, clauses (*a*), (*b*), (*c*) and (*d*) shall also be enforced as regards all boarders in the case of Non-Collegiate Hostels: and in addition thereto the Superintendent shall keep a Register of the boarders containing the names and home addresses of the boarders and of their parents or other guardians. The Register shall contain a column for remarks.

17. Every Non-Collegiate Hostel shall have written or printed rules, and such rules shall not contravene any of the foregoing conditions.

Messes.

18. A Mess is a temporary Boarding House formed by a combination of students who desire to share expenses.

A mess has not necessarily any fixity of location for a period longer than one academical year, nor does the responsibility for its finances rest with the College or Colleges to which its members belong. Students not otherwise provided for by these Regulations shall live in messes provided or approved by the College authorities.

19. In the case of messes for which the University or any other public body provides the funds in part or in whole, each

mess shall be attached to one College, and the students living in that mess shall be all students of one and the same College, and the Principal of that College shall have full control over that mess. Such messes shall be called attached messes.

The College to which a mess is attached shall appoint a Visiting Committee in consultation with the public body which provide funds for the mess and subject to the approval of the Students' Residence Committee.

20. Regulations 14 to 17 shall apply equally to attached messes.

21. Messes which receive no subvention from public bodies shall be known as unattached messes, and to them shall apply Regulations 12, 14, 15, 16 and 17.

There shall also be a Visiting Committee for unattached messes, consisting of three persons approved by the Students' Residence Committee, two of whom at least shall be representatives of the College or Colleges concerned.

Recognition and License.

22. Every Collegiate Hostel must obtain a Certificate of recognition from the University.

All other hostels and all messes must obtain annually, within such time as the Syndicate may determine, a License from the University.

All applications for recognition of Collegiate Hostels shall be submitted by the Governing Body of the College concerned, and shall be dealt with by the Syndicate. Applications for License shall be dealt with by the Students' Residence Committee, and submitted in the case of (*a*) Non-Collegiate Hostels, by the Proprietor, (*b*) Attached messes, by the Principal of the College concerned, and (*c*) Unattached messes, by the College or Colleges concerned.

23. In dealing with applications for Recognition or License, the Syndicate or the Students' Residence Committee, as the case may be, shall have regard to the following points:—

(*a*) Suitability of the buildings.
(*b*) Adequacy of the accommodation.
(*c*) Suitability of the neighbourhood.
(*d*) Sanitary conditions.

24. The Senate may from time to time make rules not inconsistent with these Regulations relating to Messes and Non-Collegiate Hostels.

Private Lodgings.

25. Upon the recommendation of the Principal of his College, a student may be permitted to live in his own residence or hired lodgings, provided that (1) if he is under 18 years of age he shall be accompanied by a tutor approved by his parents or other guardian, and (2) in any case the Students' Residence Committee is satisfied that he can be permitted so to live without detriment to his health, studies or character.

Miscellaneous.

26. The Students' Residence Committee shall have power to delegate its functions in respect of Muffasil Centres to Local Committees, which shall submit all their proceedings to the Students' Residence Committee, for submission to, and confirmation by, the Syndicate.

27. The Syndicate may, upon the recommendation of the Students' Residence Committee, sanction the admission of the following classes of boarders in non-collegiate Hostels:—

(*a*) University students.

(*b*) School boys attending a recognised School attached to an affiliated College, though such students are not related to any College-student residing in the Hostel, provided that the controlling authority of the Hostel gives adequate guarantee for the maintenance of discipline.

28. The Syndicate may, in special and exceptional cases on the recommendation of the Principal controlling an attached Mess and of the Students' Residence Committee, permit one or more students of any other affiliated College or a student of any recognised School, who is nearly related to a member of the Mess, to reside in such Mess.

CHAPTER XXV

EXAMINATIONS

Setting of Papers.

1. No question shall be asked at any University examination which would require an expression of religious belief on the part of the candidates; and any answer or translation given by

any candidate shall not be objected to on the ground of its expressing peculiarities of religious belief.

2. Candidates shall give their answers in their own words as far as practicable in all subjects. This rule shall be inserted as a head note in every question paper.

3. Examiners setting papers shall be guided, as to the scope of the subject of examination, by the syllabus prescribed in the Regulations, and as to the standard and extent of knowledge required, by the books, if any, recommended from time to time for such purpose.

4. No copy of any examination paper is to be retained by the person setting it.

5. The papers set should be such as candidates can reasonably be expected to answer within the time allotted. The questions in each subject should be fairly distributed over the whole course in that subject, and should conform to the Regulations laid down for the particular examination; there should not be any marked change of standard from year to year, but it is not required that the same type of questions should be set every year. Examiners shall always allow some choice of questions.

6. Questions should be so framed as to encourage good methods of work and teaching, and to discourage unintelligent memorizing.

Awarding of Marks.

7. In the case of examinations in all Faculties up to and including the examination for the Bachelor's Degree, the Registrar shall, as soon as the results have been tabulated, prepare a list of the candidates who have failed in one subject only; in order to guard against any possible inaccuracy, their papers in the subject in which they have failed shall be re-examined *on the method of marking already adopted, and without any alteration of the standard.*

8. Examiners, in giving marks, shall take the correctness of the language of the answer into account.

9. Examiners, in giving marks, shall consider whether the answers indicate an intelligent appreciation of the subject or are merely the result of unintelligent memory work.

Meetings of Examiners.

10. As soon as possible after an examination has been held, the persons who have set any question paper in the examina-

tion, and those who are to examine the answers to that paper or any portion of it, and the Head Examiner, if there is one, shall meet to determine the kind or standard of answers to be expected from candidates, and to decide upon a system of marking. Their conclusions shall be embodied in a memorandum to be jointly signed by them and forwarded to the Registrar. If, owing to unavoidable circumstances, any Examiner who has set a paper is unable to attend the meeting, the remaining Examiners contemplated by this Regulation shall meet and transact the aforesaid business.

11. In the case of any examination for the degree of Bachelor, Master, or Doctor in the Faculties of Arts and Science and in the case of every examination in the other Faculties, the entire body of Examiners for that examination shall meet, as soon as possible after the tabulation of the results, and draw up a report of the examination as a whole for the consideration of the Syndicate.

As soon as possible after the publication of the results of every examination in every Faculty referred to in the preceding paragraph, the persons who have examined the answer papers in each subject shall meet together and draw up a report upon the examination in that subject for the consideration of the Syndicate.

12. The reports submitted to the Syndicate shall ordinarily embody such remarks and recommendations suggested by the work done by the candidates which it is thought desirable in the interests of education to communicate to the Heads of Colleges and Schools.

Miscellaneous.

13. English shall be the medium of examination in all subjects except where otherwise specifically indicated.

14. Members of the Syndicate or of the Boards of Studies shall not be debarred from acting as Examiners.

15. Canvassing for examinerships will not be countenanced by the University; and if it is proved to the satisfaction of the Syndicate that canvassing has been carried on by any person applying for an examinership, the candidate shall be disqualified.

16. Examiners are required to keep the results of the examinations and the marks assigned to candidates strictly secret.

17. If it is proved to the satisfaction of the Syndicate that the questions in any subject are not such as candidates could reasonably be expected to answer within the time allotted, or have not been fairly distributed over the whole course in that

subject, or do not conform to the Regulations laid down for the examination in that subject, or show a marked change of standard, or that from any other cause injustice has been or is likely to be done, the Syndicate shall issue such directions as may be necessary to rectify matters.

18. No candidate shall ordinarily be declared to have passed or to have obtained Honours unless he has attained the standard laid down in the Regulations for a Pass or for Honours. If, however, the Syndicate are satisfied that consideration ought to be allowed in the case of any candidate by reason of his high marks in a particular subject or in the aggregate, the Syndicate may pass such candidate or award him Honours as the case may be:

Provided that no action shall be taken by the Syndicate in this behalf, except—

(*a*) upon the Report of the Moderators in the case of the Matriculation or the Intermediate Examination in Arts or Science, or

(*b*) upon the Report of the Examiners in the case of any other Examination.

Arts and Science Examinations.

Appointment of Examiners.

1. The Registrar shall, at such times as the Syndicate may determine, send to all Fellows on the Faculties of Arts and Science and to all Heads of Colleges affiliated in Arts and Science who are not Fellows, a circular requesting them to forward within one month the names of persons whom they consider suitable for appointment as Examiners for the University Examinations specified by the Syndicate.

Every such recommendation shall be accompanied by a brief statement of the special qualifications of their nominees.

2. Such recommendations and any applications from candidates for examinerships received by the Registrar shall, in the first instance, be referred to the Boards of Studies concerned, who shall be asked to nominate for appointment as Examiners a number of persons not less than that required for each examination as indicated by the Syndicate, and not more than half in excess of that number. In appointing Examiners the Syndicate shall consider the recommendations and applications, together with the reports of the Boards thereon, but its selection shall not be limited by them.

3. A Board of Examiners consisting of two or more persons shall be appointed by the Syndicate, whenever practicable, to set papers in each subject in each examination of the University. Each paper shall, whenever practicable, be set by two Members of the Board in consultation. In the case of a difference of opinion arising between two Examiners, the point shall be referred to the other Member or Members of the Board, if any, otherwise it shall be referred to the Syndicate.

4. One Member of the Board shall, unless the Syndicate consider it undesirable, be appointed Head Examiner in the case of examinations for which a Head Examiner is required. In other cases, as far as practicable, the Members of the Board who set the papers shall be among those who look over the answer papers.

5. For the Matriculation, the Intermediate in Arts and Science, and the B.A. and B.Sc. Examinations, no one shall be appointed Member of a Board of Examiners to set a paper in a subject of which he teaches the whole or a part for the corresponding examination.

6. The Board of Examiners in each subject for the degree of Master in the Faculties of Arts and Science shall be composed of—

(a) the University lecturers in that subject, and
(b) one or more other Examiners appointed by the Syndicate. Such Examiners shall not be persons lecturing to or preparing candidates for the examination in the subject for which the Board is constituted.

7. Each Board appointed under the preceding Regulation shall meet as soon as possible after appointment for the purpose of apportionment of the examination papers in the subject for which it has been constituted. The appointment, as far as the University Lecturers are concerned, shall ordinarily be proportionate to the course covered by their respective lectures. The distribution of papers shall be kept strictly secret.

Moderators.

8. Before the commencement of the Matriculation Examination or the Intermediate Examinations in Arts and Science, the Syndicate shall appoint five Syndics as Moderators, of whom three shall be Members of the Faculty of Arts, and two Members of the Faculty of Science.

The duties of the Moderators shall be—

(a) to receive from the Head Examiners or the Examiners, as the case may be, for the Matriculation Examina-

tion and the Intermediate Examinations in Arts and Science, a Report on the Examination in the subject with which they are concerned, to consider the Reports, and to submit a Report to the Syndicate embodying such points as ought, in their opinion, to be brought to its notice; and

(b) to report to the Syndicate the names of candidates, if any, who have not attained the standard laid down in the Regulations, but who, in the opinion of the Moderators, deserve consideration by reason of the high marks obtained by them in a particular subject or in the aggregate.

LAW EXAMINATIONS

Appointment of Examiners.

1. The Registrar shall at such times as the Syndicate may determine, send to all Fellows on the Faculty of Law and to all Heads of Colleges affiliated in Law who are not Fellows, a circular requesting them to forward within one month the names of persons whom they consider suitable for appointment as Examiners for the Preliminary, Intermediate and Final B.L. Examinations.

Every such recommendation shall be accompanied by a brief statement of the special qualifications of their nominees.

2. Such recommendations and any applications from candidates for examinerships received by the Registrar shall in the first instance, be referred to the Board of Studies in Law, who shall be asked to nominate for appointment as Examiners a number of persons not less than that required for each examination as indicated by the Syndicate, and not more than half in excess of that number. In appointing Examiners the Syndicate shall consider the recommendations and applications, together with the reports of the Board of Studies thereon, but its selection shall not be limited by them. The Dean of the Faculty of Law for the time being shall be *ex-officio* President of the Examiners thus appointed.

3. A Board of Examiners consisting of three or more persons shall be appointed by the Syndicate, whenever practicable, to set papers in each examination. The Dean of the Faculty of Law for the time being shall be *ex-officio* President of each Board. Each paper shall, whenever practicable, be set by two Members of the Board in consultation In the case of a difference of opinion arising between two Examiners, the point shall be referred to the President. The papers set shall be moderated by him in consultation with the other Members of the Board.

4. As far as practicable, the Members of the Board who set the papers shall be among those who look over the answer papers.

5. For the Preliminary, Intermediate and Final B.L. Examinations, no one shall be appointed Member of a Board of Examiners to set a paper in a subject of which he teaches the whole or a part for the corresponding examination.

Medical Examinations.

Appointment of Examiners.

1. The Registrar shall, at such times as the Syndicate may determine, send to all Fellows on the Faculty of Medicine and to all Heads of Colleges affiliated in Medicine who are not Fellows, a circular requesting them to forward within one month the names of persons whom they consider suitable for appointment as Examiners for the University Examinations specified by the Syndicate.

Every such recommendation shall be accompanied by a brief statement of the special qualifications of their nominees.

2. Such recommendations and any applications from candidates for examinerships received by the Registrar shall, in the first instance, be referred to the Board of Studies in Medicine who shall be asked to nominate a number of persons not less than that required for each examination as indicated by the Syndicate, and not more than half in excess of that number. In appointing Examiners the Syndicate shall consider the recommendations and applications, together with the reports of the Board of Studies thereon, but its selections shall not be limited by them. The Dean of the Faculty of Medicine for the time being shall be *ex-officio* President of the Examiners thus appointed.

3. A Board of Examiners consisting of two or more persons shall be appointed by the Syndicate, whenever practicable, to set papers in each subject in each examination. The Dean of the Faculty of Medicine for the time being shall be *ex-officio* President of each Board. Each paper shall, whenever practicable, be set by all the Members of the Board in consultation. In the case of a difference of opinion arising between two Examiners, the point shall be referred to the President. The papers set shall be moderated by him in consultation with the other Members of the Board.

4. As far as practicable, the Members of the Board who set the papers shall be among those who look over the answer papers.

5. Of the persons appointed to set papers in any subject for any examination, one at least must be a Teacher or Professor in that subject, and one at least, whenever available, shall be a person not teaching that subject for that examination.

6. Every oral, practical and clinical examination shall be conducted by two Examiners jointly.

ENGINEERING EXAMINATIONS.

Appointment of Examiners.

1. The Registrar shall, at such times as the Syndicate may determine, send to all Fellows on the Faculty of Engineering and to all Heads of Colleges affiliated in Engineering who are not Fellows, a circular requesting them to forward within one month the names of persons whom they consider suitable for appointment as Examiners for the University Examinations specified by the Syndicate.

Every such recommendation shall be accompanied by a brief statement of the special qualifications of their nominees.

2. Such recommendations and any applications received by the Registrar shall, in the first instance, be referred to the Board of Studies in Engineering, who shall be asked to nominate a number of persons not less than that required for each examination as indicated by the Syndicate, and not more than half in excess of that number. In appointing Examiners, the Syndicate shall consider the recommendations and applications, together with the reports of the Board thereon, but their selection shall not be limited by them. The Dean of the Faculty of Engineering for the time being shall be *ex-officio* President of the Examiners so appointed.

3. A Board of Examiners consisting of two or more persons shall be appointed by the Syndicate, whenever practicable, to set papers in each subject in each examination. The Dean of the Faculty of Engineering for the time being shall be *ex-officio* President of each Board. Each paper shall, whenever practicable, be set by two Members of the Board in consultation. In the case of a difference of opinion arising between two Examiners, the point shall be referred to the President. The papers set shall be moderated by him in consultation with the other Members of the Board.

4. As far as practicable, the Members of the Board who set the papers shall be among those who look over the answer-papers.

5. Of the persons appointed to set papers in any subject for any examination, one at least must be a Lecturer on that

subject, and one at least shall be a person not teaching that subject for that examination.

CHAPTER XXVI

CONDITIONS OF STUDY IN AFFILIATED COLLEGES

1. A College affiliated in any subject for any of the examinations mentioned in this section shall provide for the delivery of the minimum number of lectures specified hereinafter to students who take up that subject.

(*i*) Intermediate Examination in Arts or Science—

(*a*) 140 lectures in each subject, of which not less than 60 shall be delivered in the second-year.

(*b*) 70 lectures in Vernacular, of which not less than 25 shall be delivered in the second year.

Provided that the Syndicate may grant exemptions from this rule in cases where the number of students of any College reading a particular Vernacular is so small as to make it difficult to arrange for the delivery of lectures in that Vernacular.

Provided also that in Assam Colleges it shall not be obligatory on the authorities of a College to arrange for lectures in any other Vernacular than that of the majority of the students attending the College.

(*ii*) B.A. or B.Sc. Examination—

(*a*) In the Pass Course in each subject—160 lectures, of which not less than 60 shall be delivered in the second-year.

(*b*) In the Honours Course in each subject—80 lectures in addition to the lectures in the corresponding Pass Course, of which not less than 30 shall be delivered in the second-year.

(*c*) 70 lectures in Vernacular, of which not less than 25 shall be delivered in the second-year.

Provided that the Syndicate may grant exemptions from this rule in cases where the number of students of any College reading a particular Vernacular is so small as to make it difficult to arrange for the delivery of lectures in that Vernacular.

Provided also that in Assam Colleges it shall not be obligatory on the authorities of a College to arrange for lectures in any other Vernacular than that of the majority of the students attending the College.

(*iii*) M.A. or M.Sc. Examination—180 lectures in each subject.

(*iv*) Licentiate in Teaching—

Theory and Practice of Teaching	80 lectures.
Methods of Teaching	80 lectures.
Selected Educational Classics ...	20 lectures.
Course in English	60 lectures.

(*v*) Bachelor of Teaching—

Theory and Practice of Teaching ...	60 lectures.
Methods of Teaching	60 lectures.
History of Educational Ideas ...	40 lectures.
Educational Classics	20 lectures.

(*vi*) Preliminary, Intermediate or Final Examination in Law—in each subject or group of subjects 32 lectures and 12 sittings of a Moot-Court.

(*vii*) Preliminary Scientific M.B. Examination—

Inorganic Chemistry	40 lectures.
Physics	20 lectures.
Zoology	20 lectures.
Botany	20 lectures.

(*viii*) First M.B. Examination—

Anatomy	100 lectures.
Physiology	80 lectures.
Pharmacology	80 lectures.
Organic Chemistry	15 lectures.

(*ix*) Final M.B. Examination—

Medicine	100 lectures.
Mental Diseases	8 lectures.
Surgery	100 lectures.
Ophthalmology	15 lectures.
Midwifery	80 lectures.
Medical Jurisprudence	40 lectures.
Hygiene	20 lectures.

In the Medical Course there shall be in addition to the lectures specified above practical courses as prescribed by the Syllabus.

2. If a College fails for three consecutive years to deliver the minimum number of lectures prescribed above in any subject, proceedings shall be taken under section 24 of the Indian Universities Act to withdraw from it the privileges of affiliation in that subject.

3. Every lecture shall cover a period of not less than 45 minutes inclusive of the time allowed by the College Rules for the assembling of the students.

4. For the purpose of these Regulations a period of practical work or class exercises or class examinations of not less than 45 minutes shall be considered to be equivalent to a lecture.

5. Every candidate, who desires to appear as a collegiate student at any one of the examinations mentioned in section 1, shall be required to prosecute a regular course of study for the time specified in the Regulations in the subjects which he takes up for the examination in question.

6. No student shall be considered to have prosecuted a regular course of study in any subject for any examination unless he has attended at least 75 per cent. of the lectures delivered in that subject in one or more affiliated Colleges.

7. No lecture shall be deemed to be a lecture within the meaning of these Regulations, unless it is delivered to a whole class or permanent section of a class and unless it is reckoned in calculating the percentage of attendance of all students of the class or section who have taken up the subject in which the lecture is delivered.

8. If the College to which the student belongs, is not affiliated in a particular subject which he desires to take up for examination, he may be permitted, by mutual arrangement between the Principals of the Colleges concerned, to attend lectures on that subject in another duly affiliated College.

9. The percentage of attendance of every student under section 5 shall be calculated on the total number of lectures delivered in each subject from the commencement of the academical year. If a student is transferred from one College to another, the percentage of attendance in the first College shall be calculated on the total number of lectures delivered in each subject up to the date borne on the transfer certificate, and in the second College on the lectures delivered after that date.

10. In cases where a student, after study for the period prescribed by the Regulations, shall have failed to attend 75 per cent. of the lectures in any subject or subjects during this course, he shall not be admitted to the examination as a collegiate student, unless (*a*) he attends lectures in such subject or subjects for another academical year, and (*b*) his attendance in the subject or subjects in question for the period prescribed by the Regulations amounts to at least 75 per cent. of the lectures delivered in the College or Colleges in which he studies for the prescribed period.

11. If a candidate for any of the examinations mentioned in Regulation 1 does not present himself at the examination immediately succeeding the completion of his regular course of study, he may appear at any of the two following examinations

of the same standard, provided that he produces, in addition to the ordinary certificate or certificates as required by the Regulations, a certificate from the Principal of the College at which he last studied or from a Member of the Senate, testifying to his good character during the intervening period.

If such candidate desires to present himself at any subsequent examination he shall be required to prosecute a fresh course of study for the full period in accordance with the Regulations.

12. No student shall be considered to have prosecuted a regular course of study in any subject for the M.A. or M.Sc. Examination under University Professors or Lecturers unless the total number of lectures delivered by such Professors or Lecturers is at least 180, and unless he has attended at least 75 per cent. of the lectures in each course.

If, however, the total number of University lectures delivered in any subject does not amount to 180, attendance on 75 per cent. of the lectures in each available course will suffice.

13. The students of affiliated Colleges or University students who may be in Military or Naval training will, for purposes of admission to their respective examinations, be deemed to have attended all lectures and practical work during such period in their respective classes in the subjects taken up by them provided they produce certificates of having been in such training from the officer under whom they were in training.

Provided also that in the case of students with Science subjects they produce certificates from their Principals or some other competent authority approved by the Syndicate, to the effect that they have taken satisfactory courses of practical work in those subjects.

CHAPTER XXVII

CONDITIONS TO BE FULFILLED BY COLLEGES AFFILIATED IN SCIENCE

GENERAL.

Colleges affiliated in any Science subject except Geography and Experimental Psychology must be provided with gas and a plentiful supply of water, and there must be adequate connexions for these with the portion of the building allotted to Science teaching. There must be a suitably fitted lecture-theatre of the ordinary type, and the lecture-table, which should not be

less than 12 feet long, must be provided with gas and water fittings, and must also be adapted in other respects for lecture demonstrations in the various sciences for which it is intended to use the theatre. There should be an aperture in one of the walls by which a beam of solar light can be admitted for optical and projection work. One lecture-theatre will ordinarily suffice, but if the number of subjects in which the College is affiliated is considerable, additional accommodation in this respect will be necessary. There shall be separate rooms for practical work in each of the subjects for which the College is affiliated, and in each such room there shall be a good black-board and a small demonstration table. A sufficient quantity of apparatus, etc., must be provided both for practical and lecture work, and there must be ample cupboard room for the apparatus when not in use. Lists are given in Appendix B shewing what may be considered the minimum requirements in each case. For all Colleges affiliated up to the M.A. or M.Sc. standard in Physics or Chemistry an electric installation is desirable and should certainly be provided wherever there is a town supply of electricity.

SPECIAL.

I.—Physics.

(*a*) *Intermediate Standard.*—Not more than 20 students shall be placed under one teacher in the practical class at one time. If the number exceeds 20, an additional teacher or demonstrator will be required. The size of a room which it is intended shall accommodate the above number of students shall not be less than 20 feet by 25 feet. If the number of students exceeds 20, the size of the room must be proportionately increased. The working tables should be small, about 6 feet by 3 feet, and should be very strongly made of teakwood. One or two large sinks with water taps must be provided.

(*b*) *B.A. or B.Sc. Standard.*—There shall be one teacher to every 15 students in the practical class. The room used for the Intermediate course, having the dimensions given above, will suffice for the B.A. or B.Sc students and for a class of fifteen but it is necessary for the work in the present course that each working place on the tables should be supplied with gas. A small room for optical work is desirable, but if it is not possible to provide this a portion of the laboratory, which in this case should be larger, may be screened off for the purpose. A small workshop should be attached to the laboratory.

(*c*) *M.A. or M.Sc. Standard.*—There shall be one teacher to every 10 students in the practical class. In addition to the general laboratory two other rooms will be necessary, one for optical and the other for electrical work. A larger workshop

will be necessary than in the previous case, and it should be furnished with a good lathe A permanent *mistri* should be employed

II.—Chemistry.

(*a*) *Intermediate Standard.*—Not more than 20 students shall be placed under one teacher in the practical class at one time. If the number exceeds 20, an additional teacher or demonstrator will be required. The size of a room which it is intended shall accommodate the above number of students, shall not be less than 20 feet by 30 feet, and if the number of students exceeds 20, it must be proportionately increased. The working benches must be provided with gas, one jet for each student. Those benches which occupy the centre of the room should, for the sake of economy of space, be of double width, so as to admit of students working on both sides, and the shelf for reagents may, in this case, run along the centre of the table. Water taps with the corresponding sinks, should be provided in the ratio of about one to four students but the sinks in the case of the tables of double width, may be replaced by a properly treated wooden trough running along the centre. Two or three fume closets are necessary; one will suffice, if the working tables are supplied with small draught hoods.

(*b*) *B.A. or B.Sc. Standard.*—There shall be one teacher to every 15 students in the practical class. The laboratory for the Intermediate course can be adapted for the use of the B.A. and B.Sc. students as well. A small and well-lighted balance room and a combustion room must be provided in addition.

(*c*) *M.A. or M.Sc. Standard.*—An additional laboratory with rooms for special work shall be provided for the use of M.A. and M.Sc. students not more than ten of whom shall be under the supervision of one teacher.

III.—Physiology.

(*a*) *Intermediate Standard.*—Not more than 24 students shall be placed under one teacher. The working benches shall be furnished with racks for chemical and microscopical reagents. and gas, water and sinks shall be supplied in the same way as in the chemical laboratory. The size of a room for 24 students shall be not less than 20 feet by 30 feet.

(*b*) *B.A. or B.Sc. Standard.*—Not more than 12 students shall be placed under one teacher. The room for the practical work of the Intermediate standard can with some slight adaptation be also used for the present standard.

(*c*) *M.A. or M.Sc. Standard.*—For M.A. or M.Sc. Classes at least two additional laboratories are necessary for special work.

IV.—Botany.

The number of students that may be placed under one teacher in the practical classes is the same as for Physiology and the conditions to be fulfilled with regard to the laboratories are substantially the same as in that subject.

V.—Zoology.

Not more than 20 students shall be placed under one teacher in the practical classes. Otherwise the requirements are the same as in the case of Physiology and Botany. except that the accommodation required for M.A and M.Sc. students will not be so great as in those subjects.

VI.—Geology.

The chief requirements in this subject are a small geological museum, and a laboratory suitable for optical as well as for a certain amount of chemical work.

VII.—Geography.

There must be a small museum for practical teaching and demonstration, and a well-lighted room suitable for drawing and modelling, and fully furnished with the appliances necessary for the course of practical work prescribed by the Regulations.

VIII.—Experimental Psychology.

The laboratory must be furnished with plastic and other models and charts for anatomical and physiological demonstrations, in addition to the appliances necessary for psycho-physical work, and must also be suitable for optical and electrical work.

CHAPTER XXVIII

UNIVERSITY LIBRARY

1. At the Annual Meeting, the Senate shall appoint two committees, one to be called the Library General Committee, and the other the Library Executive Committee.

2. The General Committee shall consist of the Vice-Chancellor, the Registrar, and twelve members of the Senate.

The Executive Committee shall consist of the Vice-Chancellor, the Registrar, and three members of the General Committee.

Members of the Committees shall hold office till the next Annual Meeting.

In the event of a vacancy occurring in the course of the year it shall be at once filled up by the Syndicate.

3. The General Committee shall meet ordinarily once every six months, and, at other times, when convened by the Vice Chancellor. Seven members shall form a quorum.

The Executive Committee shall meet ordinarily once a month, and, at other times, when convened by the Vice-Chan-Chancellor. Seven members shall form a quorum.

4. The proceedings of the meetings of the Committees shall be recorded and regularly submitted to the Syndicate for confirmation. The Syndicate may approve, revise, or modify the decision of either Committee on any matter, or direct the Committee to review it

5. The duties of the General Committee shall be—

(I) to recommend to the Syndicate rules regulating—

(a) the use of the Library by Fellows, by Registered Graduates, and by other persons,
(b) the payment of fees for the use of the Library by persons other than Fellows,
(c) the conditions of borrowing and returning books,
(d) the suspension of privileges for the loss, mutilation, or disfigurement of books, or for any breach of the Library Rules,
(e) the annual inspection of the Library, and
(f) all other matters relating to the management of the Library :

(II) to recommend to the Executive Committee the purchase of books and manuscripts.

6. The duties of the Executive Committee shall be to give orders for the purchase, arrangement and cataloguing of the books and manuscripts, for the provision of book-cases and other fittings, for the cleaning of the Library, and for all ordinary repairs, and generally to supervise the management of the Library, and to do all that is in their opinion desirable for the maintenance of the Library in an efficient condition, so far as it is practicable to do so within the limits of the annual grant.

7. Upon the recommendation of the Syndicate, the Senate shall annually make a grant for the Library, and may, if necessary, add to the grant in the course of the year.

8. The Syndicate shall make an annual report to the Senate concerning the state of the Library and all matters concerning the Library which in their opinion should be brought to the notice of the Senate. The report shall be accompanied by a statement of the expenditure of all moneys devoted to the purposes of the Library.



CHAPTER XXIX

TRANSITORY REGULATIONS

1. In this chapter, the phrase " new Regulations " shall be taken to mean the present body of Regulations.

The phrases " existing Bye-laws," " existing Regulations," and " existing Rules " shall be taken to refer respectively to the Bye-laws, Regulations and Rules in operation on the date previous to that on which the new Regulations come into force.

2. All questions relating to the alteration or cancellation of existing Bye-laws, Regulations and Rules shall be decided with reference to the provisions of this chapter.

Act VIII of 1904, Sec. 25 (2) (q).

3. The new Regulations shall come into force on the date of their publication in the *Gazette of India;* such date shall be called the date of commencement of the new Regulations.

4. Except as hereinafter provided, on and from the date on which the new Regulations come into force, all existing

(i) Bye-laws,
(ii) Regulations, and
(iii) Rules which are in any way inconsistent with the new Regulations.

shall cease to have operation.

5. As soon as practicable after the date of commencement of the new Regulations, the Vice-Chancellor shall cause steps to be taken for the appointment of the Faculties, the Syndicate, the Boards of Studies, the Board of Accounts, the Library General Committee, the Library Executive Committee, the Transfer Committee, the Students' Residence Committee, the Registrar and the Inspector of Colleges, in accordance with the new Regulations:

Provided that any act which is required by the new Regulations to be done, at, before, or after an Annual Meeting, may

for this purpose be validly done, at, before, or after, a Special Meeting.

6. As soon as each of the Faculties, the Syndicate, each of the Boards of Studies and the Board of Accounts is duly constituted under Regulation 5, the corresponding body provisionally constituted under section 12 (*q*) of the Indian Universities Act, shall cease to exist:

Provided that each of these provisional Bodies so long as it continues to exist, shall discharge its functions in accordance with the existing Bye-laws, which shall be deemed to be in force for this purpose.

7 The Faculties, the Syndicate, the Boards of Studies, the Board of Accounts, the Library General Committee, the Transfer Committee, the Students' Residence Committee and the Library Executive Committee appointed under Regulation 5 shall continue to hold office till they are reconstituted in 1908 in accordance with the new Regulations.

8. The Registrar holding office at the commencement of the new Regulations shall continue to hold office till the Registrar appointed under Regulation 5 assumes charge. If, in the interval, there is a vacancy in the office of Registrar, the Syndicate may appoint an Acting Registrar on such terms as may be found necessary. The Registrar appointed under Regulation 5 shall continue to hold office not later than the 31st of March, 1912.

9. The Inspector of Colleges appointed under Regulation 5 shall continue to hold office not later than the Annual Meeting of the Senate in 1912.

10. The Matriculation Examination shall be held for the first time in accordance with the new Regulations in 1910.

11. The Entrance Examination in 1907, 1908, and 1909 shall be held in accordance with the existing Regulations and Rules, which for this purpose, shall be deemed to be in force.

12. Any person who passes or has passed the Entrance Examination shall be deemed qualified for admission to any University Examination other than that mentioned in section 42 in the same manner as if he had passed the Matriculation Examination in accordance with the new Regulations.

13. The Intermediate Examination in Arts shall be held for the first time in accordance with the new Regulations in 1909.

14. The First Examination in Arts in 1907 and 1908 shall be held in accordance with existing Regulations and Rules, which, for this purpose, shall be deemed to be in force.

15. Any person who passes or has passed the First Examination in Arts shall be deemed qualified for admission to any University Examination other than that mentioned in Regulation 42 in the same manner as if he had passed the Intermediate Examination in Arts or the Intermediate Examination in Science in accordance with the new Regulations. For the purpose of the Examination mentioned in Regulation 42 of this chapter, a student who has passed the F.A. or the Intermediate in Arts, shall be deemed qualified in the same manner as a student who has matriculated in accordance with the new Regulations.

16. Any candidate who fails at the First Examination in Arts in 1908 or has failed in any previous year, or who was qualified to appear at any such examination but did not appear, or who was not sent up to any such examination by reason of deficiency in attendance at lectures or who was not permitted by the Principal of his College to appear, may be admitted to the Intermediate Examination in Arts or the Intermediate Examination in Science in 1909, provided he has prosecuted in accordance with the new Regulations, a regular course of study for one academical year in the subjects he offers. Any candidate appearing at a subsequent examination shall strictly comply with the new Regulations.

17. The B.A. Examination shall be held for the first time in accordance with the new Regulations in 1909.

18. The B.A. Examination in 1907 and 1908 shall be held in accordance with the existing Regulations and Rules, which, for this purpose, shall be deemed to be in force

19. The M.A. Examination shall be held for the first time in accordance with the new Regulations in 1909.

20. The M.A. Examination in 1906, 1907 and 1908 shall be held in accordance with the existing Regulations and Rules, which, for this purpose, shall be deemed to be in force.

21. Any Bachelor of Science who, in or before 1908, passes or has passed the M.A. Examination in Mathematics or in any branch of Natural or Physical Science, shall be entitled to the same privileges for the purpose of admission to the University Examinations as if he had passed the M.Sc. Examination in accordance with the new Regulations.

22. The Examination for the Degree of Doctor of Philosophy shall be held for the first time in accordance with the new Regulations in 1907.

23. The Intermediate Examination in Science shall be held for the first time in accordance with the new Regulations in 1909.

24. The B.Sc. Examination shall be held for the first time in accordance with the new Regulations in 1909.

25. The B.Sc. Examination in 1907 and 1908 shall be held in accordance with the existing Regulations and Rules, which for this purpose, shall be deemed to be in force.

26. The M.Sc. Examination shall be held for the first time in accordance with the new Regulations in 1909.

27. The Examination for the Degree of Doctor of Science shall be held for the first time in accordance with the new Regulations in 1908.

28. The Examination for the Degree of Doctor of Science in 1906 and 1907 shall be held in accordance with the existing Regulations and Rules, which, for this purpose, shall be deemed to be in force.

29. The Preliminary Examination in Law shall be held for the first time in accordance with the new Regulations in 1908.

30. The Final Examination in Law shall be held for the first time in accordance with the new Regulations in 1909.

31. The B.L. Examination in 1906, 1907 and 1908 shall be held in accordance with the existing Regulations and Rules, which, for this purpose, shall be deemed to be in force.

32. (*i*) Any candidate who fails at the B.L. Examination in 1908, or has failed in any previous year, or who was qualified to appear at any such examination but did not appear, may, in any year not later than 1912, appear at the Preliminary Examination in Law, and if he passes, may appear at the Final Examination in Law, in the same year or in any subsequent year not later than 1912.

(*ii*) Any candidate who is not or has not been sent up to the B.L. Examination of 1908 or of any previous year by reason of deficiency in attendance in lectures, shall be entitled to the same privileges as the candidates referred to in the preceding paragraph, provided he makes up his deficiency in accordance with the existing Regulations.

(*iii*) In any year subsequent to 1912 no person shall be admitted to either the Preliminary or the Final Examination in Law, except in strict conformity with the new Regulations.

33. The M.L. Examination shall be held for the first time in accordance with the new Regulations in 1907.

34. The Examination for Honours in Law in 1906 shall be held in accordance with the existing Regulations and Rules

which, for this purpose, shall be deemed to be in force. Any candidate who may pass at such Examination shall be entitled to the same privileges as if he had passed the M.L. Examination in the first class under the new Regulations.

35. Up to 1907 the Degree of Doctor of Law shall be conferred in accordance with the existing Regulations, and in and after 1908 in accordance with the new Regulations.

36. The Preliminary Scientific L.M.S. Examination in accordance with the existing Regulations and Rules shall be held for the last time in 1907, and for this purpose those Regulations and Rules shall be deemed to be in force.

37. The First L.M.S. Examination in 1907, 1908 and 1909 (and in no subsequent year), shall be held in accordance with the existing Regulations and Rules, which, for this purpose, shall be deemed to be in force.

38. The Second L.M.S. Examination in 1907, 1908, 1909, 1910 and 1911 (and in no subsequent year), shall be held in accordance with the existing Regulations and Rules, which, for this purpose, shall be deemed to be in force.

39. Any candidate who fails in the Preliminary Scientific L.M.S. Examination in 1907 may appear at the Preliminary Scientific M.B. Examination in 1908 or 1909, provided he attends in an affiliated College a regular course of lectures for one academical year, in the subjects in which he has failed as also in the additional subjects in which he has not previously attended any lectures. If any such candidate attains the standard laid down in the new Regulations for the Preliminary Scientific M.B. Examination, he shall be declared to have passed that examination.

40. Any candidate who fails in the First L.M.S. Examination in 1909 may appear at the First M.B. Examination in 1910 or 1911, provided he attends in an affiliated College a regular course of lectures for one academical year, (*i*) in the subjects in which he has failed, (*ii*) in any additional subjects in which he has not previously attended any lectures, and (*iii*) in the subject of Zoology as prescribed for the Preliminary Scientific M.B. Examination under the new Regulations. If such candidate attains the standard laid down in the new Regulations for the First M.B. Examination and also passes an examination in Zoology in the standard of the Preliminary Scientific M.B. Examination, he shall be declared to have passed the First M.B. Examination.

41. Any candidate who fails in the Second L.M.S. Examination in 1911 may appear at the Second M.B. Examination in

1912 or 1913, provided he attends in an affiliated College a regular course of lectures for one academical year in the subjects in which he has failed. If such candidate attains the standard laid down in the new Regulations for the Second M.B. Examination (Parts I and II or Part II only, as the case may be), he shall be granted a certificate of having passed the Second L.M.S. Examination.

42. The Preliminary Scientific M.B. Examination shall be held for the first time in accordance with the new Regulations in 1908. Provided that at the Examinations held in 1909 and 1910 no one shall be admitted who has not passed the F.A. Examination or the Intermediate in Arts or the Intermediate in Science.

43. The Preliminary Scientific M.B. Examination in 1907 and 1908 shall be held in accordance with the existing Regulations and Rules, which, for this purpose shall be deemed to be in force.

In 1908 there shall be two Examinations, one in accordance with the existing Regulations and the other in accordance with the new Regulations. For the latter no one shall be eligible who has not passed the F.A. Examination.

44. The First M.B. Examination shall be held for the first time in accordance with the new Regulations in 1910.

45. The First M.B. Examination in 1907, 1908 and 1909 shall be held in accordance with the existing Regulations and Rules, which, for this purpose, shall be deemed to be in force.

46. The Final M.B. Examination shall be held for the first time in accordance with the new Regulations in 1913.

47. The Second M.B. Examination in 1907-1912 shall be held in accordance with the existing Regulations and Rules, which, for this purpose, shall be deemed to be in force.

48. The Examinations for Honours in Medicine, for the Degrees of Doctor of Medicine, Master of Surgery and Master of Obstetrics, and for the Diploma in Public Health, shall be held for the first time in accordance with the new Regulations in 1907.

49. The Examination for the Degree of Doctor of Medicine in 1906 shall be held in accordance with the existing Regulations, which, for this purpose, shall be deemed to be in force.

50. The Intermediate Examination in Engineering shall be held for the first time in accordance with the new Regulations in 1909.

51 In 1907, 1908 and 1909 the First Examination in Engineering shall be held in accordance with the existing Regulations and Rules, which, for this purpose, shall be deemed to be in force.

52. In 1910 and 1911, the First Examination in Engineering shall be held in accordance with the existing Regulations and Rules, which, for this purpose, shall be deemed to be in force:

Provided, however, that at the examination in either of these years, only the following classes of candidates shall be allowed to appear:—

(*a*) Candidates who have failed at any previous F. E. Examination.

(*b*) Candidates who have not passed any examination higher than the Entrance or Matriculation Examination.

53. Any candidate who fails at the F. E. Examination in 1911 may be admitted to the Intermediate Examination in Engineering in 1912 or 1913.

54. Any person who passes or has passed the F. E. Examination shall be deemed qualified for admission to University Examinations in the same manner as if he had passed the Intermediate Examination in Engineering in accordance with the new Regulations.

55. The B. E. Examination shall be held for the first time in accordance with the new Regulations in 1911.

56. The B. E. Examination in 1907, 1908, 1909 and 1910, and the L. E. Examination in 1907-1912, shall be held in accordance with the existing Regulations and Rules, which, for this purpose, shall be deemed to be in force.

57. The Examination for Honours in Engineering shall be held for the last time in 1907 in accordance with the existing Regulations, which, for this purpose, shall be deemed to be in force.

58. Up to 1909 the Degree of Master in Engineering shall be conferred in accordance with the existing Regulations, which, for this purpose, shall be deemed to be in force.

59. The Degree of Doctor of Science (Engineering) may be conferred in 1907 in accordance with the new Regulations.

60. The Examination for Licentiate in Teaching and Bachelor of Teaching shall be held for the first time in 1908.

61. As soon as practicable after the commencement of the new Regulations, the Syndicate shall frame, subject to the approval of the Senate:—

(a) A revised body of Rules for the conduct of the examinations which, according to the preceding Regulations, have to be held in accordance with the existing Regulations; and

(b) A body of Rules for the conduct of the examinations to be held in accordance with the new Regulations:

Provided that nothing in the Rules made under (a) shall contravene the existing Regulations, and nothing in the Rules made under (b) shall contravene the new Regulations.

62. Nothing in the Regulations contained in this Chapter shall be deemed to prohibit any alteration in the existing Regulations and Rules, provided such alteration is made by the Body competent in that behalf, and in the same manner prescribed by the new Regulations.

63. Within eight weeks from the date when these Regulations come into force the Principal of every affiliated College shall forward to the Registrar the name of every student on the rolls of the College, together with the registration fee of Rs. 2 required for matriculation by Regulation 6 of Chapter XV. The Registrar shall, upon receipt of the fee, enter the name of every such student on the Register of University students.

64. In any case not covered by the preceding Regulations of this Chapter the Syndicate shall give such directions as may be justified by the special circumstances of the case.

CHAPTER XXX

MATRICULATION EXAMINATION

1. The Matriculation Examination shall be held annually in Calcutta and in such other places as shall, from time to time, be appointed by the Syndicate, the approximate date to be notified in the Calendar

2. Ordinarily, only students who have been educated for at least one school year previous to the date of the Matriculation Examination at a school recognised by the Calcutta University

for such purpose, shall be admitted to the Matirculation Examination. Private candidates, who have not attended any school for at least one year previous to the Examination, shall also be admitted to the Examination, provided that (*a*) before appearing at such Examination they have passed a preliminary test held for such purpose by a Government Inspector of Schools or under his orders, and (*b*) satisfactory evidence is adduced before the Inspector that the candidate has prosecuted a regular course of study, and has been subject to proper discipline.

3 No one shall be admitted to the Matriculation Examination, unless he shall have completed the age of fifteen years on the first day of the month in which he appears at the Examination.

4. Every candidate sent up for the Matriculation Examination by a recognised school shall be required to produce a certificate (*a*) of good conduct, (*b*) of diligent and regular study, (*c*) of having satisfactorily passed periodical school examinations and other tests, (*d*) of probability of passing the examination.

5. Every candidate for admission to the Matriculation Examination shall send in his application with a certificate in the form prescribed by the Syndicate, either to the Registrar or to a local officer recognised by the Syndicate. Every such application must reach the office of the Registrar at least six weeks before the date fixed for the commencement of the examination.

6. A fee of fifteen rupees shall be forwarded by each candidate with his application. A candidate, who fails to pass, or to present himself for examination, shall not be entitled to claim a refund of the fee. He may be admitted to one or more subsequent Matriculation Examinations, subject to the conditions laid down in these Regulations.

7. The Matriculation Examination shall be conducted by means of printed papers, the same papers being used at every place at which the Examination is held.

8. The Matriculation Examination shall be a general test of fitness for a course of University studies.

9. Candidates for the Matriculation Examination shall be examined in the following subjects:—

1. English ... ... *Two papers.*
2 Mathematics ... ... *One paper.*

3 One of the following languages:—

Sanskrit, Pali, Arabic, Persian, Hebrew, Classical Armenian, Classical Tibetan, Greek, Latin,

French, German, Syriac, Portuguese, Bengali, Hindi, Urdu, Assamese, and Burmese, provided that a candidate may take up one of the last six languages, only if it is not his vernacular.*

One paper.

Candidates who take up French or German as their Second Language, shall not be allowed to take up French or German as their vernacular.

4. One of the following vernacular languages:—

Bengali, Hindi, Uriya, Assamese, Urdu, Burmese, Modern Armenian, Modern Tibetan, Khasi, Nepali (Parbatia), Telugu, Marathi, Gujrathi, Maithili, Tamil, Kanarese, Malayalam, Sinhalese, Garo, Manipuri, Portuguese, Lushai *One paper.*

The Syndicate shall have power to add to this list.

If the vernacular of a candidate is a language not included in the above list, he shall have an alternative paper in:—

(*a*) English composition, or
(*b*) French, or
(*c*) German.

5 and 6. Two out of the following:—

(*i*)	Additional Mathematics ...	*One paper.*
(*ii*)	An additional paper in the classical language, taken up as subject No. 3 ...	*One paper.*
(*iii*)	History of India, including a short account of the Administration of British India and of the Progress of India under British Rule	*One paper.*
(*iv*)	Outlines of General Geography, including the elements of Mathematical and Physical Geography: with the Geography of India in fuller detail ...	*One paper.*
(*v*)	Elementary Mechanics ...	*One paper.*
(*vi*)	**Elementary Hygiene ...	*One paper.*
(*vii*)	Business Method and Correspondence ...	*One paper.*
(*viii*)	Commercial Geography ...	*One paper.*

* Also Bengali, Assamese, Burmese, Hindi, Khasi, Urdu, Uriya, Tamil Telugu, French and German for Female candidates (sanctioned by the Syndicate).

** No school will be allowed to present a candidate in this subject unless the Syndicate are satisfied that suitable arrangements have been made for teaching it.

Candidates who take up (*iii*) or (*vi*) will be permitted to submit their answers in that subject in one of the following languages:—

English, Bengali, Hindi, Uriya, Assamese, Urdu, Burmese, or Modern Armenian.

Candidates who are certified to belong to the Hill Tribes or other Aboriginal races are allowed the choice of the following combination of subjects:—

(1) English, (2) Mathematics, (3) A Vernacular Language or the Alternative Paper in English Composition, French or German as specified above, (4) History, (5) Geography, (6) Mechanics or Additional Mathematics.

Each paper shall be of three hours and shall carry 100 marks.

10. As soon as possible after the Examination the Syndicate shall publish a list of the candidates who have passed arranged in three divisions each in alphabetical order. Every candidate shall on passing receive a certificate in the form entered in Appendix A.

11. The limits of the subjects are defined below, and books shall be recommended, when necessary, to indicate the standard and extent of knowledge required in the different subjects.

ENGLISH.

I. (*i*) The Matriculation Examination in English shall be a test (*a*) of ability to write clear, simple and correct English, (*b*) of intelligent comprehension of plain modern English on familiar subjects.

(*ii*) The course in English shall include select pieces in prose and verse to be prescribed by the Syndicate on the recommendation of the Board of Studies in English. The Syndicate shall also draw up, on the recommendation of the Board, a small selection of books as showing the standard up to which students will be expected to have read.

(*iii*) The first paper in English shall include passages in one of the following vernaculars for translation into English:—

Bengali, Hindi, Uriya, Urdu, Burmese, Modern Armenian, Modern Tibetan, Parbatia, Assamese, Khasi, Tamil, Gujrathi, French, Telugu, Malayalam, Marathi, Garo, Lushai, Kanarese, Sinhalese, Manipuri, Chinese and Mundari.

The Syndicate shall have power to add to this list.

(*iv*) Questions shall be set under the following heads, namely:—

(*a*) Passages from prescribed texts.
(*b*) Simple unseen passages.
(*c*) Grammar and Composition.
(*d*) Translation from one of the recognised vernaculars into English.
(*e*) Simple Essays.

2. Candidates may be asked to explain, summarise, or paraphrase the passages set, or to answer any question thereon which will test their understanding of the meaning or the construction. Historical, geographical, and literary allusions shall be excluded.

3. The head "Grammar and Composition" shall include (*a*) questions involving the practical application of the elementary rules of Grammar, (*b*) questions on the right use of words and phrases, and (*c*) exercises in composition.

4. Passages for translation may be narrative or descriptive, or may consist of simple conversations on ordinary subjects. They must be such as may be easily rendered from the one language into the other. They shall, where possible, be taken from recognised vernacular authors; and they shall not consist of any translation made for the purpose of the examination, from English into the vernacular.

5. Two essays shall be set, giving in the one case not merely the subject, but also headings under the subject, for the candidates to expand in their own words, and in the other merely the subject without headings.

6. The distribution of the heads and of marks in the two papers shall be as follows:—

Paper I.	Translation from a vernacular into English; three short passages shall be set, of which two only must be attempted, each carrying twenty marks ...	40 *marks.*
	Two Essays, each carrying fifteen marks	30 *marks.*
	Grammar and Composition ...	30 *marks.*
Paper II.	(*a*) Questions on the subject-matter and on the language of the prescribed texts	50 *marks.*
	(*b*) Unseen passages	50 *marks.*

MATHEMATICS.

Compulsory Paper.

(A) *Arithmetic.*—The four Simple Rules, Vulgar and Decimal Fractions, Reductions, Practice, Proportion, Simple Interest. Problems more easily solvable by Algebra should not be required to be solved arithmetically.

(B) *Algebra.*—The four Simple Rules, Proportion, Simple Equations, Greatest Common Measure, Least Common Multiple, Graphs of Simple Equations.

(C) *Geometry*—

PRACTICAL.

Bisection of angles and of straight lines.
Construction of perpendiculars to straight lines.
Construction of an angle equal to a given angle.
Construction of parallels to a given straight line.
Construction of triangles with given parts.
Division of a straight line into a given number of equal parts.
Construction of a parallelogram equal to a given triangle and having one of its angles equal to a given angle.
Construction of a triangle equal in area to a given rectilineal figure.
Construction of a tangent to a circle.
Easy extensions of these constructions may be given as problems.
Candidates may be required to give the reasons for any particular construction involved in any question.

Every candidate is required to provide himself with the following:—a hard pencil, dividers, pencil-compasses, and a straight ruler showing centimetres and inches.

THEORETICAL.

Angles at a point.

If a straight line stands on another straight line, the sum of the two angles so formed is equal to two right angles, and the converse.

If two straight lines intersect, the vertically opposite angles are equal.

Parallel straight lines.

If a straight line, cutting two other straight lines, makes—

(*i*) the alternate angles equal,
(*ii*) two corresponding angles equal,
(*iii*) the interior angles on the same side of the line supplementary,

then the two straight lines are parallel, and the converse.

Straight lines which are parallel to the same straight line are parallel to one another.

Triangles and rectilineal figures.

The sum of the angles of a triangle is equal to two right angles.

If the sides of a convex polygon are produced in order, the sum of the angles so formed is equal to four right angles.

Two triangles are equal in every respect—

(*i*) if two sides and the included angle of one triangle are respectively equal to two sides and the included angle of the other;
(*ii*) if two angles and a side of the one triangle are respectively equal to two angles and the corresponding side of the other.

If two sides of a triangle are equal, the angles opposite to these sides are equal, and the converse.

Two triangles are equal in every respect, if the three sides of one triangle are respectively equal to the three sides of the other.

Two right-angled triangles are equal in every respect, if they have their hypotenuses equal, and one side of the one equal to one side of the other.

If two sides of a triangle are unequal, the greater side has the greater angle opposite to it, and the converse.

Any two sides of a triangle are together greater than the third.

Of all the straight lines that can be drawn to a given straight line from a given point outside it, the perpendicular is the shortest.

The opposite sides and angles of a parallelogram are equal: each diagonal bisects the parallelogram, and the diagonals bisect one another.

If there are three or more parallel straight lines, and the intercepts made by them on any straight line that cuts them are

equal, then the corresponding intercepts on any other straight line that cuts them are equal.

Areas.

Parallelograms on the same or equal bases and of the same altitude are equal in area.

Triangles on the same or equal bases and of the same altitude are equal in area.

Equal triangles on the same or equal bases are of the same altitude.

Illustrations and explanations of the geometrical theorems corresponding to the following algebraical identities:—

$$k(a+b+c\ldots)=ka+kb+kc+\ldots$$
$$(a+b)^2=a(a+b)+b(a+b).$$
$$a(a+b)=a^2+ab.$$
$$(a+b)^2=a^2+2ab+b^2.$$
$$(a-b)^2=a^2-2ab+b^2.$$
$$a^2-b^2=(a+b)(a-b).$$

The square on a side of a triangle is greater than, equal to, or less than, the sum of the squares on the other two sides, according as the angle contained by those sides is obtuse, right, or acute. The difference in the cases of inequality is twice the rectangle contained by one of the two sides and the projection on it of the other.

Loci.

The locus of a point which is equidistant from two fixed points is the perpendicular bisector of the straight line joining the two fixed points.

The locus of a point which is equidistant from two intersecting straight lines consists of the pair of straight lines which bisect the angles between the two given lines.

The Circle.

A straight line drawn from the centre of a circle to bisect a chord which is not a diameter, is at right angles to the chord; conversely, the perpendicular to a chord from the centre bisects the chord.

There is one circle, and one only, which passes through three given points not in a straight line.

In equal circles (or in the same circle) (*i*) if two arcs subtend equal angles at the centre, they are equal, (*ii*) conversely, if two arcs are equal, they subtend equal angles at the centre.

In equal circles (or in the same circle) (*i*) if two chords are equal, they cut off equal arcs. (*ii*) conversely, if two arcs are equal, the chords of the arcs are equal.

Equal chords of a circle are equidistant from the centre, and the converse.

The tangent at any point of a circle is perpendicular to the radius through the point.

If two tangents are drawn to a circle from an external point, (*i*) they are equal, (*ii*) they subtend equal angles at the centre of the circle.

If two circles touch, the point of contact lies on the straight line through the centres.

The angle which an arc of a circle subtends at the centre is double that which it subtends at any point on the remaining part of the circumference.

Angles in the same segment of a circle are equal; and if the line joining two points subtends equal angles at two other points on the same side of it, the four points lie on a circle.

The angle in a semi-circle is a right angle; the angle in a segment greater than a semi-circle is less than a right angle; and the angle in a segment less than a semi-circle is greater than a right angle.

The opposite angles of any quadrilateral inscribed in a circle are supplementary, and the converse.

If a straight line touch a circle, and from the point of contact a chord be drawn, the angles which this chord makes with the tangent are equal to the angles in the alternate segments.

If two chords of a circle intersect either inside or outside the circle, the rectangle contained by the parts of the one is equal to the rectangle contained by the parts of the other.

Each question on Theoretical Geometry shall consist of a theorem contained in the above schedule together with an easy deduction.

Any proof of a proposition shall be accepted, which appears to the Examiners to form part of a systematic treatment of the subject, but proofs of theorems, should, as far as possible, be based on first principles; the order in which the theorems are stated in the above schedule is not to be regarded as essential.

In the proof of theorems and deductions from them, it shall be permissible to use hypothetical constructions.

The ordinary symbolical abbreviations may be used.

SANSKRIT.

Compulsory Paper.

1. The course shall include simple pieces in prose and verse selected from the following works:—Hitopadesa, Panchatantra, Ramayana, Mahabharata and Vishnu Purana. To the above list other works may, from time to time, be added by the Syndicate on the recommendation of the Board of Studies in Sanskrit. The selections shall be prescribed and prepared by, and be the property of, the University, and they shall be notified two years before the examination for which they are prescribed.

2. A book of Elementary Sanskrit Grammar shall also be prepared and prescribed by the University and be its property.

3. The marks in the compulsory paper in Sanskrit shall be distributed as follows:—

(*i*) Passages from the prescribed texts for translation into English, together with (*a*) grammatical questions, and (*b*) questions on the subject-matter of the texts. 50 *marks*.

Under this head simple translation from the text shall in no case carry more than 25 marks.

(*ii*) Questions involving the practical use of the elementary rules of Grammar, including passages containing grammatical errors for correction ... 25 *marks*.

(*iii*) Translation of simple sentences from English into Sanskrit; such sentences shall in no case be translations of portions of the prescribed texts 25 *marks*.

PALI.

Compulsory Paper.

1. The course in Pali shall include simple pieces in prose and poetry selected from the undermentioned works of the Khuddaka Nikáya of the Sutta Pitaka.

Prose—Játaka.
Poetry—Khuddakapátha.

To the above list other works may, from time to time, be added by the Syndicate on the recommendation of the Board of Studies in Sanskritic Languages.

The selections shall be notified two years before the examination for which they are prescribed.

2. Grammars will be recommended from time to time and a general knowledge of the following shall be demanded from the candidate:—(*a*) *Sandhi-kappa*, (*b*) *Náma-kappa*, including *Sabda-rupa*, *Káraka*, *Samása* and *Taddhita*, (*c*) *Akhyáta*, and (*d*) *Kita-kappa* excluding *Unádi*.

3. The marks in the compulsory paper in Pali shall be distributed as follows:—

(1) Passages from the prescribed texts for translation into English, together with (*a*) grammatical questions and (*b*) questions on the subject-matter of the texts ... 50 *marks*.

Under this head simple translation from the text shall in no case carry more than 25 marks.

(2) Questions involving the practical use of the elementary rules of Grammar, including passages containing grammatical errors for correction ... 25 *marks*.

(3) Translation of simple sentences from English into Pali; such sentences shall in no case be translations of portions of the prescribed texts ... 25 *marks*.

ARABIC.

Compulsory Paper.

1. The course in Arabic shall include selections from any or all of the following works:—

(1) Qoran.
(2) Alf Layla.
(3) Tarikh Tabari.
(4) Ar-reuzut-ul-Adabiyya by ' Irain.'
(5) Jawahirul-Adab by Hashemi.
(6) Hadiqatul Adab by Ibrahim Dasuqi.
(7) Majaniul Adab, Parts I and II, Shaikhu.
(8) Nakherb-ul Mulah, Part I.
(9) Diwan Ali.
(10) Nafhatul yemen.

The selections, which will be chosen with a view to avoiding difficulty and obscure passages, shall be prepared by and be the property of the University.

2. The course shall include the general principles of Arabic Grammar according to modern methods; and the University shall prepare and prescribe an Arabic Grammar, which shall be its property.

The Board of Studies concerned may make such modifications in the list of books as may seem to them desirable.

The scope of the subject of each paper shall from time to time be defined by the Board concerned and the distribution of marks may be modified in such manner as may seem desirable to the Board.

3. The marks in the compulsory paper in Arabic shall be distributed as follows:—

(1) Passages from the prescribed texts for translation into English, together with (*a*) grammatical questions, and (*b*) questions on the subject-matter of the texts ... 50 *marks*.

Under this head simple translation from the text shall in no case carry more than 25 marks.

(2) Questions involving the practical use of the elementary rules of Grammar, including passages containing grammatical errors for correction ... 25 *marks*.

(3) Translation of simple sentences from English into Arabic; such sentences shall in no case be translations of portions of the prescribed texts ... 25 *marks*.

PERSIAN.

Compulsory Paper.

1. The course in Persian shall include selections from any or all of the following works:—

PROSE.

(1) Gulestan.
(2) Baharestan.
(3) Safar Namah of Nasir Khusrau.
(4) Parishan of Qa'ani.
(5) Ahwali Kalambus by Mirza Mohomed Shirazi.
(6) Chingizl han Nama by Khawand Shah.

POETRY.

(1) Paudnama of Altar.
(2) Masnauiyyat of Hazin.
(3) Diwan of Khusrau of Delhi.
(4) Bustan.
(5) Anisul Arifin by Md. Hussain Shirazi.
(6) Biwan-i-Ubaydi.
(7) Mannwa Salwa by Mufti Md. Abbas.

The selections shall be prescribed and prepared by the University and be its property.

2 The course shall further include the principles of Persian Grammar and composition.

Grammars shall be recommended by the Board of Studies concerned.

The Board of Studies concerned may make such modifications in the list of books as may seem to them desirable.

The scope of the subject of each paper shall from time to time be defined by the Board concerned and the distribution of marks may be modified in such manner as may seem desirable to the Board.

3. The marks in the compulsory paper shall be distributed as follows :—

(1) Passages from the prescribed texts for translation into English, together with (*a*) grammatical questions, and (*b*) questions on the subject-matter of the texts ... 50 *marks*.

Simple translation from the text shall in no case carry more than 25 marks.

(2) Questions involving the practical use of the elementary rules of Grammar, including passages containing grammatical errors for correction ... 25 *marks*.

(3) Translation of simple sentences from English into Persian; such sentences shall in no case be translations of portions of the prescribed texts ... 25 *marks*.

ARMENIAN.

Compulsory Paper.

1. The course shall consist of the following:—

Elishe's History of the War of the Vardanians, Parts I and II.

Elishe Vardapiet Doorian's "Course of Classical Armenian," Part I [Prose and Verse].

2 Grammars will be recommended by the Board of Studies.

3. The marks in the compulsory paper in Armenian shall be distributed as follows :—

(1) Passages from the prescribed texts for translation into English together with (*a*) grammatical questions, and (*b*) questions on the subject-matter of the texts ... 50 *marks*.

Under this head simple translation from the text shall in no case carry more than 25 marks.

(2) Questions involving the practical use of the elementary rules of Grammar, including passages containing grammatical errors for correction ... 25 *marks*.

(3) Translation of simple sentences from English into Armenian; such sentences shall in no case be translations of portions of the prescribed texts ... 25 *marks*.

HEBREW.

Compulsory Paper.

1. The course shall include selections from Genesis, Isaiah and the Psalms.

To the above list other portions of the Old Testament may from time to time be added by the Syndicate on the recommendation of the Board of Studies in Hebrew, who shall also recommend Grammars. The course shall be notified two years before the Examination for which it is prescribed.

2. The marks in the compulsory paper in Hebrew shall be distributed as follows:—

(1) Passages from the prescribed texts for translation into English together with (*a*) grammatical questions, and (*b*) questions on the subject-matter of the texts ... 50 *marks*.

Under this head, simple translation from the text shall in no case carry more than 25 marks.

(2) Questions involving the practical use of the elementary rules of Grammar, including passages containing grammatical errors for correction ... 25 *marks*.

(3) Translation of simple sentences from English into Hebrew; such sentences shall in no case be translations of portions of the prescribed texts ... 25 *marks*.

GREEK.

Compulsory Paper.

1. The course in prose shall consist of suitable portions of Xenophon, Lucian, and the New Testament.

The course in verse shall consist of suitable portions of Euripides. The course shall be notified two years before the examination for which it is prescribed.

2. The marks in the compulsory paper in Greek shall be distributed as follows:—

(1) Passages from the prescribed texts for translation into English, together with (*a*) grammatical questions, and (*b*) questions on the subject-matter of the texts ... 50 *marks*.

Under this head simple translation from the text shall in no case carry more than 25 marks.

(2) Translation of unseen passages from Greek into English ... 35 *marks*.

(3) Translation from English into Greek ... 15 *marks*.

LATIN.

Compulsory Paper.

1. The course in prose shall consist of suitable portions of Cæsar or Sallust.

The course in verse shall consist of suitable portions of Ovid or Virgil's Æneid. The course shall be notified two years before the examination for which it is prescribed.

2. The marks in the compulsory paper in Latin shall be distributed as follows:—

(1) Passages from the prescribed texts for translation into English, together with (*a*) grammatical questions, and (*b*) questions on the subject-matter of the texts ... 50 *marks*.

Under this head simple translation from the text shall in no case carry more than 25 marks.

(2) Translation of unseen passages from Latin into English ... 25 *marks*.

(3) Translation from English into Latin ... 25 *marks*.

FRENCH.

Compulsory Paper.

1. The course in French shall consist of one work in prose and selections in verse from one or more writers, which shall be prescribed from time to time by the Board of Studies concerned. The course shall include French Grammar.

2. The marks in the compulsory paper in French shall be distributed as follows:—

(1) Passages from the prescribed texts for translation into English, together with (*a*) grammatical questions, and (*b*) questions on the subject-matter of the texts ... 50 *marks*.

Under this head simple translation from the text shall in no case carry more than 25 marks.

(2) Translation of unseen passages from French into English ... 25 *marks.*

(3) Translation from English into French ... 25 *marks.*

VERNACULARS.

1. The course in Vernacular shall include select texts in prose and verse to be prescribed by the Syndicate on the recommendation of the Board of Studies concerned.

The Syndicate shall also draw up, on the recommendation of the Board, a small selection of books by notable authors as showing the standard up to which students will be expected to have read.

2. The examination shall include:

(*a*) Questions on the subject-matter and on the language of the prescribed texts ... 40 *marks.*

(*b*) An Unseen Passage to be summarised or amplified in the Vernacular ... 15 *marks.*

(*c*) Translation from English into Vernacular 15 ,,

(*d*) Questions on Composition ... 10 ,,

(*e*) An Essay in Vernacular—headings being given ... 20 ,,

3. The unseen passage shall not exceed in difficulty the

(*a*) Vernacular texts prescribed for the examination.

(*b*) Questions shall not be set on the history of language or literature of the Vernacular.

The following Syllabus in Bengali has been prescribed by the Syndicate for the Matriculation Examination of Female Candidates :—

Compulsory Paper.

1. The course shall include books in Prose and Verse, to be prescribed by the Syndicate on the recommendation of the Board of Studies in Sanskritic Languages.

2. A book on Bengali Grammar shall also be prescribed or recommended by the University.

3. The marks for the compulsory paper in Bengali shall be distributed as follows :—

(*i*) Passages from the prescribed texts for translation into English together with (*a*) grammatical questions, and (*b*) questions on the subject-matter of the texts ... 50 *marks.*

Under this head simple translation from the texts shall in no case carry more than 25 marks.

(*ii*) Questions involving the practical use of the elementary rules of Grammar, including passages containing grammatical errors for correction ... 25 *marks.*

(*iii*) Easy unseen passages in modern Bengali Prose for translation into English ... 25 *marks.*

4. The Alternative Paper in English (for candidates whose Vernacular is a language not included in the prescribed list) shall include:

(a) questions on selected texts in prose and verse to be prescribed by the Syndicate on the recommendation of the Board of Studies in English; and
(b) questions on composition, including Rhetoric and Prosody.

5. The papers in French and German shall consist of prose passages for translation into English, and one or more easy pieces for translation from English.

No text-books shall be prescribed, but a number of works shall from time to time be recommended as indicating the standard up to which candidates will be expected to have read.

MATHEMATICS.

Additional Paper.

In addition to the Syllabus for the Compulsory paper the following:—

(A) *Arithmetic*—Extraction of Square Root; Exercise in the Metric System; Approximation to a specified degree of accuracy.

(B) *Algebra*—Quadratic Equations with one unknown quantity; Extraction of Square Root; Graphs of Pure Quadratic Equations (excluding constructions with different scales along two axes); Arithmetical and Geometrical Progressions; the Elementary Laws of Indices.

(C) *Geometry*—

PRACTICAL.

Simple cases of the construction of circles satisfying given conditions.

Construction of regular figures of 3, 4, 5, or 6 sides in or about a given circle.

Construction of a square equal in area to a given rectangle.

THEORETICAL.

Proportion: Similar Triangles.

If a straight line is drawn parallel to one side of a triangle the other two sides are divided proportionally; and the converse.

If two triangles are equiangular, their corresponding sides are proportional; and the converse.

If two triangles have one angle of the one equal to one angle of the other, and the sides about these equal angles proportional, the triangles are similar.

If a polygon is divided into triangles by a line joining a given point to its vertices, any similar polygon can be divided into corresponding similar triangles.

The ratio of the areas of two similar triangles or of two similar polygons, is equal to the ratio of the squares on the corresponding sides.

The internal bisector of an angle of a triangle divides the opposite side internally in the ratio of the sides containing the angle; and likewise the external bisector externally.

SANSKRIT.

Additional Paper.

In the additional paper in Sanskrit the marks shall be distributed in the following manner:—

(1) Further questions on the text, in which simple translation from the text shall not carry more than 10 marks ... 20 *marks.*

(2) Simple unseen passages for translation from Sanskrit into English ... 30 *marks.*

(3) Questions on Grammar ... 25 *marks.*

(4) Translation from English into Sanskrit ... 25 *marks.*

PALI.

Additional Paper.

In the additional paper in Pali the marks shall be distributed in the following manner:—

(1) Further questions on the text, in which simple translation from the text shall not carry more than 10 marks ... 20 *marks.*

(2) Simple unseen passages for translation from Pali into English ... 30 *marks.*

(3) Questions on Grammar ... 25 *marks.*

(4) Translation from English into Pali ... 25 *marks.*

ARABIC.

Additional Paper.

In the additional paper in Arabic the marks shall be distributed in the following manner:—

(1) Further questions on the text, in which simple translation from the text shall not carry more than 10 marks ... 20 *marks.*
(2) Simple unseen passages for translation from Arabic into English ... 30 *marks.*
(3) Questions on Grammar ... 25 *marks.*
(4) Translation from English into Arabic ... 25 *marks.*

PERSIAN.

Additional Paper.

In the additional paper in Persian the marks shall be distributed in the following manner:—

(1) Further questions on the text, in which simple translation from the text shall not carry more than 10 marks ... 20 *marks.*
(2) Simple unseen passages for translation from Persian into English ... 30 *marks.*
(3) Questions on Persian Grammar ... 15 *marks.*
(4) Translation from English into Persian ... 35 *marks.*

ARMENIAN.

Additional Paper.

In the additional paper in Armenian the marks shall be distributed in the following manner:—

(1) Further questions on the text, in which simple translation from the text shall not carry more than 10 marks ... 20 *marks.*
(2) Simple unseen passages for translation from Armenian into English ... 30 *marks.*
(3) Questions on Grammar ... 25 *marks.*
(4) Translation from English into Armenian 25 *marks.*

HEBREW.

Additional Paper.

In the additional paper in Hebrew the marks shall be distributed in the following manner:—

(1) Further questions on the text, in which simple translation from the text shall not carry more than 10 marks ... 20 *marks.*
(2) Simple unseen passages for translation from Hebrew into English ... 30 *marks.*
(3) Questions on Grammar ... 25 *marks.*
(4) Translation from English into Hebrew ... 25 *marks.*

LATIN AND GREEK.

Additional Paper.

In the additional papers in Latin and Greek the marks shall be distributed in the following manner:—

(1) Further questions on the text, in which simple translation from the text shall not carry more than 10 marks ... 20 *marks.*
(2) Unseen passages from Greek or Latin into English ... 30 *marks.*
(3) Unseen passages from English into Greek or Latin ... 30 *marks.*
(4) Questions on Grammar ... 20 *marks.*

FRENCH.

Additional Paper.

In the additional paper in French the marks shall be distributed in the following manner:—

(1) Further questions on the text, in which simple translation from the text shall not carry more than 10 marks ... 20 *marks.*
(2) Unseen passages from French into English 30 *marks.*
(3) Unseen passages from English into French 30 *marks.*
(4) Questions on Grammar ... 20 *marks.*

HISTORY.

History of India.

The physical features of the country.

The aborigines of India. Immigrations from the north-east and north-west.

The Aryans. The Indo-Aryans.

The Vedas. Relation of the Rig-Veda to other Vedas

The Brahmanas. The Smritis, Manu.

The caste system.

Buddha and Buddhism.

Mahavira and the Jains.

The kingdoms of Kosala and Magadha: the empire of the Nandas.

Invasion of Alexander the Great.

Accounts of India given by Greek writers.

The Maurya empire. Chandra-Gupta. Asoka.

The Kusana empire; Kanishka. The Saka era. The Gupta empire; Buddhist architecture and the Fine Arts. Chinese pilgrims. Kalidas. Vikramaditya; the Vikrama era.

Rise of the Rajputs.

Mahomedan conquest of Sind and the Punjab; Mahmud of Gazni.

Hindu civilisation on the eve of the Mahomedan rule in India.

The Pathan dynasties. Muhammad Ghori. Qutb-ud-Din. Altamish. Rizia. Mogul invasion.

Conquest of Gujrat, Malwah and the Deccan; incursions into Southern India. Ala-ud-Din.

The Tughlak dynasty. Muhammad Tughlak. Firuz Tughlak. Timur's invasion. Break-up of the Pathan empire. The Mahomedan kingdoms of Delhi, Bengal, Jaunpur, Gujarat, the Deccan; and the Hindu kingdoms of Vijaynagar, Meywar and Orissa.

Rise of religious sects under Pathan rule: Ramananda, Kabir, Nanak, Chaitanya. Spread of Mahomedanism. Pathan architecture. The Urdu language. Indian literature in Pathan times.

The Mogul dynasty: Babar; Humayun; Sher Shah; Restoration of Humayun.

Akbar: Todar Mal; Abul-Fazl.

Jehangir; Nur Jehan; Sir Thomas Roe; Shah Jehan; Bernier; Mogul architecture.

Aurangzeb: Rajput revolt; his treatment of the Hindus; Sivaji and the Mahrattas; Break-up of the Mogul empire.

The successors of Aurangzeb; revolt of the provinces; invasions of the Mahrattas; invasions of Nadir Shah and Ahmed Shah Abdali. Struggle for supreme power between Mahomedans and Mahrattas; the Mahratta confederacy; extent of Mahratta dominion; contact of the Mahrattas with the English.

The Europeans in India; discovery of the Cape route to India by the Portuguese. The Dutch, the French and the

English Merchant Companies, and early settlements. First Charter of the East India Company.

The French in India, Dupleix. The English in India; Clive; English wars and territorial acquisitions in Madras, Bengal and Bombay. Plassey; the Dewany. Early History of Calcutta. Clive's system of administration. Warren Hastings: his financial, revenue and judicial reforms; his relations with native powers.

The Regulating Act; Warren Hastings, first Governor-General; extent of British dominion in his time

Pitt's India Act; Lord Cornwallis: his administrative reforms; the Permanent Settlement. Sir John Shore: his non-intervention policy.

Lord Wellesley; his wars with Mysore and with the Mahrattas; the system of Subsidiary Treaties.

Lord Minto; state of Central India; extension of relations of British Indian Government with foreign powers outside India; renewal of the Company's Charter.

Lord Hastings; his wars with Nepal and with the Mahrattas. Lord Amherst; the First Burmese war.

Lord William Bentinck; his social and administrative reforms; renewal of the Company's Charter. Sir Charles Metcalfe.

Lord Auckland; his policy; the First Afghan War. Lord Ellenborough; the Sind War. Lord Hardinge; the First Sikh War.

Lord Dalhousie; the second Sikh War; the Doctrine of Lapse and the Annexation policy; the Second Burmese War. Material progress of the country under Dalhousie.

Lord Canning; the Indian Mutiny, probable causes; the assumption of direct Government by the Crown; the Queen's Proclamation.

India under the Viceroys: Financial reforms; the Orissa Famine and other great famines; the Second and Third Afghan Wars; the Third Burmese War; delimitation of Frontier boundaries.

The Mahrattas: their rise; Sivaji and his successors; Mahratta system of war, administration, and revenue; rise of the Peshwas; Baji Rao; his successors; origin of the chief existing Mahratta states.

Mysore: an ancient Hindu kingdom; Hyder Ali; his wars with the Mahrattas; the Nizam and the English; Tipu Sultan; Restoration of the Hindu dynasty.

The Sikhs: their origin and religion; Guru Govinda; their struggle with Ahmed Shah Abdali; Ranjit Singh; his conquests; the Khalsa; Ranjit Singh's successors.

PROGRESS OF INDIA UNDER BRITISH RULE.

1. Earliest declarations of principles of English rule.—Variety of races and religions, and of conflicting interests; these interests subordinated to one great common interest that all have as subjects and citizens of one State. No ruling caste in India. The Queen's Proclamation.

2. Respect for indigenous ideas and institutions.—Freedom of faith and worship for all classes. No interference with seats of Oriental learning. Their encouragement in later times. Hindu Law applicable to Hindus and Mahomedan Law to Mahomedans in certain classes of cases. Methods of land settlement. Early Village Police Panchayets. Early methods of judicial administration.

3. Advanced Western ideas and institutions adapted and introduced as an agency of progress.—

I. Political.—Codes embodying the most modern English juridical ideas. Open administration of justice. Equality of all men in the eye of the law. Litigious system of criminal procedure. The right of prisoners to be defended by counsel. No conviction or sentence without a trial. Trial by jury. Varieties of Local Self-Government. Progress of the elective system.

II. Social.—Social practices of a criminal character not tolerated. Abolition of suttee, of infanticide, of hook-swinging. Legalisation of the re-marriage of Hindu widows. Removal of disabilities of Hindus from conversion to Christianity. Female Education. Laws in regard to decency and morals.

III. Educational.—Primary, secondary, and higher education. Higher Education through the medium of the English language. Religious neutrality in education. Education open to all castes, races and sects. Scientific, technical and artistic education. Research. Education in foreign countries. Universities. Libraries. Museums. Learned Societies. Preservation of ancient records Encouragement of authors.

IV. Economic.—Encouragement of industries. Free trade. Protective works against famine. Famine relief. Remission of revenue. Measures for the benefit of ryots. Agricultural Banks. Savings Banks. Protection of inventions. Industrial Exhibitions. Free scope for commercial and industrial enterprise.

V. Material.—Reclamation of waste lands. Railways. Telegraphs. Irrigation Works. Mills. Factories.

Dockyards. Tanks. Wells. Bridges. Landing places. Roads. Harbours. Fortifications. Sanitation. Measures for dealing with epidemics. Geological and other surveys. Forest laws. Mining operations. Preservation of ancient monuments.

VI. Civic.—Freedom of the Press. Right of public meeting. Right of petitioning. Eligibility to appointments in the public service and to honorary offices. Openness of the professions.

VII. General.—A high standard of general efficiency in the administration. Repression of thuggi and dacoity. Increased security of life and property. Widened spheres of popular activity. Awakening of a new national life.

THE PRESENT ADMINISTRATION OF INDIA.

Defence:—The Indian Army, and the British Naval Squadron in Indian waters.

Agencies for the maintenance of order:—The Magistracy and the Police.

The Viceroy and Governor-General of India; his responsibility to the Secretary of State: his Executive and Legislative Councils.

Constitution of various Provincial Governments.

Administration of Justice, Judicial Committee of the Privy Council, the Highest Court of Appeal.

The High Courts established by Charter granted by the King in Parliament. Chief Courts established by the Government of India. District Courts; Civil and Criminal.

Chief sources of Revenue:—The Land Revenue: the Permanent, Raiyatwari and Talukdari Settlements. Salt and Opium Monopolies: Excise Duties: Import Duties: Income Tax: Direct and Indirect taxes.

Chief heads of Expenditure.

Local Self-Government; Municipalities; District Boards; Local Boards; Unions; Panchayets.

The Native States and the general nature of their connection with the British Government by subsidiary treaties: Hyderabad, Mysore, Kashmir, Gwalior, Baroda. Smaller States under an Agent to the Governor-General: names of these Agencies. Some small States under the control of the Provincial Governors.

A text-book on the Present Administration of India and on the Progress of India under British Rule shall be prepared and prescribed by the University and be its property.

No text-books shall be prescribed on the historical portion of the Syllabus but the Board of Studies shall, from time to

time, recommend suitable books to indicate the standard of knowledge required.

GEOGRAPHY.

(i) General.

(a) The Earth's shape, day, night, and the seasons.

Divisions of the Earth's surface; Latitude and Longitude.
The compass; simple map-making.
Land-forms, and the action of climatic forces on them.
The general relief of the Globe, *i.e.*, the great slopes of the world as forming the continental water-partings, and deciding the general distribution of rainfall.
The great oceans of the world, and their relation to the great water-partings; winds, tides, and currents.

(b) Outlines of the Political Geography of the world.

(ii) Special.

Political and General Geography of India and Burma, including the following points:—

1. *Natural regions and surface features.*

2. *Distribution of rocks and economic minerals.*

Action of weather on rocks. Formation of soil. The work of rain and rivers. Alluvium.

3. *Climate.*

4. *Vegetation.*

Forest, pasture land, agricultural land, desert. Areas rendered cultivable by systems of irrigation. The distribution of teak, sal, and cocoanut trees; of rice, millet, wheat; of cotton, tea and jute.

5. *Animal Life.*

The principal animals and their distribution.

6. *Industries.*

The leading industries and their location. Circumstances favouring their growth.

7. *Population.*

Approximate number and density. Distribution of races, languages, and religions. Agricultural and non-agricultural elements of the population.

8. *Means of communication.*

The chief roads, waterways, and railways, and mountain passes.

9. *Commerce.*

The principal commodities exchanged and the countries of exchange. The chief ports, and their leading imports and exports.

ELEMENTARY MECHANICS.

I.—MOTION.

Varieties of motion.
Elementary notions of velocity and acceleration.
Motion of a body with constant acceleration.
Composition and resolution of motions.
Bodies falling freely under gravity.
Special cases of bodies falling under gravity (inclined plane, projection in any direction, etc.)

II.—FORCE.

Elementary notions of mass, inertial momentum.
Force measured by rate of change of momentum
Units of force; poundal, dyne.
Relation between mass and weight.
Atwood's machine.
Impulsive forces—impulse.
Newton's laws of motion.
Balancing of forces.
Conditions for the equilibrium of three forces not parallel.
Triangle and parallelogram of forces.
Moments.
Conditions for the equilibrium of three parallel forces.
Composition and resolution of parallel forces in one plane.
Centre of parallel forces
Centre of gravity. Mass-centre. Position of centre of gravity in stable and unstable equilibrium.
Methods of finding the centre of gravity of systems of particles in elementary cases.
Mass-centre of a triangle—of the perimeter of a triangle—of two bodies, whose individual mass-centres are given.
Illustrations of conditions of equilibrium in simple machines; levers; balance; pulleys; inclined plane.

The subject is to be treated mainly experimentally. No knowledge of mathematics except such as may be necessary for elucidating experiments and as may fall within the limits of the

Matriculation Mathematics, compulsory and additional, shall be required.

ELEMENTARY HYGIENE.

I. *Definition of Hygiene—personal and public.*

II. *General structure of the human body.*—The skeleton; muscles; nervous, respiratory, circulatory, secretory and excretory systems. Organs of special sense.

III. *General functions of the human body.*—Locomotion; Innervation: Physiology of Respiration, Circulation and Digestion. Secretion and Excretion.

IV. *Air.*—Its average composition. Functions of Oxygen. The air before and after respiration. Other sources of impurities. Air of crowded rooms. Evil effect of impure air. Increased incidence of Tuberculosis in India. Dust and its dangers. Air-borne diseases.

Means of purification of air, *natural and artificial;* part played by plants. Ventilation. Minimum air-space for each person in schools and dwelling-houses.

V. *Water.*—Its composition. Natural waters.

The need for water and the quantity per individual.

Chief sources of water-supply in Bengal and how they are polluted.

Chief impurities of water and their significance. Hard and soft waters.

How to keep the sources of water (wells, tanks, etc.) free from pollution.

Means for purification of drinking water; distillation; filtration; use of chemicals; boiling.

Evil effects of impure or scanty supply of water. Water-borne diseases.

VI. *Food.*—Its six nutritive principles (Proteids, Fat, Carbohydrate, Salts, Vitamins and Water), their respective functions and the quantity of each required in health for people of different ages and vocations.

Composition of common foodstuffs:—

Milk; Meat; Fish; Eggs; Poultry; Flour; Rice; Dal; Butter, Ghee and Oil; Sugar; Potatoes; various fresh vegetables, fruits and nuts.

Characters of good meat, fish and milk.

Common adulterants of food.

Food in relation to diseases.

Accessories of food—condiments and chutneys. Good drink and harmful drinks—tea, coffee, and cocoa; aerated waters; alcohol.

Construction of suitable diet—Scales for different people. Eating of food and time of eating; intemperance in eating; insufficiency of food.

Cooking, storage and distribution of food.

Some preserved foods.

VII. *Dwelling Houses.*—Selection of site; houses to be constructed on well-thought-out plans; plenty of light and air; protection against damp; good drainage; privies, cowsheds and stables at some distance from the main building; sufficient open space between contiguous houses; adequate arrangements for disposal of refuse and filth.

Huts in villages; low lands to be avoided; plinth well-raised; sufficient number of openings for light and air in each room; situation of latrines and cowsheds; arrangements for drainage and disposal of sewage.

VIII. *Preventive medicine.*—Epidemic and endemic diseases. Malaria, Cholera, Small-pox, Plague, Influenza, Typhoid fever, Kala-azar, Dysentery, Tuberculosis, Consumption, Hook-worm and other common parasitic diseases—a brief study as to their origin and modes of spread and the measures for their prevention.

Insects in relation to spread of diseases.

Small-pox and Vaccination.

A general knowledge of antiseptics, disinfectants, and inoculations.

Disinfection of rooms, clothing, beddings, excreta and discharges.

IX.—*Personal Hygiene.*—Care of teeth, hair, skin, eyes, ears, nose, and throat. Baths, Clothings—Materials and forms used should be adapted to the climate, habits and occupation of the people. Clothing of children.

Work and Exercise.—Out-door and in-door games.

Fatigue, Rest and Sleep.—Amount of sleep required for persons of different ages.

Importance of attitudes and postures. Eyesight and its preservation. Bad habits.

X. *Evil effects of the use of intoxicating Drugs.*—Tobacco, Opium, Indian hemp, Cocaine.

Note.—It is not intended that candidates should be examined in Chemistry, Anatomy, Physiology or like contributory subjects; but the student should be taught, with the aid of experiments, such simple facts in these contributory subjects as

may be essential, for an elementary scientific knowledge of hygiene.

Books should be recommended with a view to indicate the scope of the Syllabus.

BUSINESS METHODS AND COMMERCIAL CORRESPONDENCE.

1. Writing of Business Letters and Announcements.
2. Characteristics and parts of a Business Letter.
3. The Treatment of outgoing correspondence, preserving copies, indexing, precis-writing, filing inward correspondence, docketing, addressing envelopes, etc.
4. Drafting of advertisements.
5. Various modern office appliances (including duplication).
6. Telegram (including codes).
7. Business Forms, such as, Invoices, Statements, Receipts, Cheques, Paying-in slips, Debit and Credit Notes, Bills of Exchange, etc.
8. Preparation of the above Commercial Forms from particulars given. Different kinds of books kept in an office—their nature and contents.
9. Methods adopted in Export and Import Trade (including an elementary knowledge of transportation and insurance).
10. Banks and their services.
11. Coins and weights and measures of principal countries.
12. Sale of Goods.
13. Business undertakings—Partnership, Private and Limited.
14. A general knowledge of Joint-Stock Companies' procedure
15. Necessary books, forms, returns, etc.
16. Business terms and abbreviations.

COMMERCIAL GEOGRAPHY.

1. General Geography—The Globe, Latitude, Longitude Time—Great and Small Circles—The distribution of land and water—The leading facts of wind and water circulation—Maps, scales and projections.
2. Elements of Physical Geography—Temperature—Pressure—Permanent and Seasonal winds—Humidity—Rainfall—The chief types of climates.
3. Configuration and position—Mountains—Rivers—Nature of coasts—Their influence upon distribution of population, occupations, industries, and transport of a country.

4. Principal Products of the World—Agricultural—Pastoral—Mineral—Manufacturing—Their origin and important markets.

5. The causes of the rise and growth of towns, ports and markets.

6 Economic Geography of India, with special reference to—

(a) Soils.
(b) Climate.
(c) Principal agricultural, pastoral and mineral products.
(d) Principal industries
(e) Cities and ports.
(f) Nature and direction of trade.
(g) Communication.
(h) Irrigation.
(i) Sources of power.

7. Map-drawing.

GENERAL.

1. In order to pass the Matriculation Examination a candidate must obtain—

(i) In English, either:—

In the first paper 40 marks, and in the aggregate of the two papers 72 marks; or, in the aggregate of the two papers 80 marks.

(ii) In the Vernacular paper, or in the paper alternative to it, 36 marks.

(iii) In the compulsory Classical language paper, 30 marks.

(iv) In the compulsory Mathematical paper, 30 marks and in the aggregate of all the papers, 250 marks.

Provided that if less than 30 marks are obtained in any of the additional papers or subjects, such marks shall not be included in the aggregate.

2. Candidates who obtain 350 marks in the aggregate shall be placed in the First Division, and those who obtain 280 in the Second Division.

3. Any candidate who has failed in one subject only, and by not more than 5 per cent. of the full marks in that subject, and has shown merit by gaining 350 marks, shall be allowed to pass. In order to determine the Division in which such a candidate will be placed and his place in the Division, the number of marks by which he has failed in one subject shall be deducted from his aggregate.

4. If the Moderators are of opinion that, in the case of any candidate not covered by the preceding Regulations, consideration ought to be allowed by reason of his high proficiency in a particular subject or in the aggregate, they shall report the case to the Syndicate, and the Syndicate may pass such candidate

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CHAPTER XXXI.

INTERMEDIATE EXAMINATION IN ARTS.

1. The Intermediate Examination in Arts shall be held annually in Calcutta and in such other places as shall, from time to time, be appointed by the Syndicate, the approximate date to be notified in the Calendar.

2. Any under-graduate of the University may be admitted to this examination, provided he has prosecuted a regular course of study in one or more Colleges affiliated for this purpose, for not less than two academical years after passing the Matriculation Examination.

Any student who has passed the Intermediate Examination in Science may take up the course for the Intermediate Examination in Arts at the second year's stage, and, after one year's regular course of study in one or more Colleges affiliated for the purpose, appear at the examination. He will be excused attendance and examination in the subject or subjects in which he has already passed at the Intermediate Examination in Science.

3. Every candidate sent up for the Intermediate Examination in Arts by an affiliated College shall produce a certificate (*a*) of good conduct, (*b*) of diligent study, (*c*) of having satisfactorily passed the College periodical examinations and other tests, and (*d*) of probability of passing the examination. Every candidate for admission shall send in his application with a certificate in the form prescribed by the Syndicate either to the Registrar or to a local officer recognised by the Syndicate. Every such application must reach the office of the Registrar at least six weeks before the date fixed for the commencement of the Examination.

4. A fee of thirty rupees shall be forwarded by each candidate with his application. A candidate who fails to pass or to present himself for examination shall not be entitled to claim a refund of the fee. A candidate who fails to pass may be ad-

mitted to any one or more subsequent Intermediate Examinations in Arts on payment of a like fee of thirty rupees on each occasion, provided he produces a certificate from the Head of an affiliated College showing that he has prosecuted a regular course of study for one academical year since the date of the last examination, in each of the subjects in which he is to be examined.

5. The Intermediate Examination in Arts shall be conducted by means of printed papers, the same papers being used at every place at which the Examination is held.

6. As soon as possible after the Examination, the Syndicate shall publish a list of the candidates who have passed, arranged in three divisions, the first in order of merit and the second and third in alphabetical order. Every candidate shall, on passing, receive a certificate in the form entered in Appendix A.

7. The subjects for the Intermediate Examination in Arts shall be—

(1) English ... ... Three papers.
(2) One of the following vernacular languages:—Bengali, Hindi, Uriya, Assamese, Urdu, Burmese, Modern Armenian, Khasi, Nepali (Parbatia), Maithili, Modern Tibetan, Marathi, Gujrathi, Telugu, Tamil, Kanarese, Malayalam, Sinhalese, Portuguese, Persian, provided that a candidate may take up the last subject if it is not taken up as a Classical Language.

The Syndicate shall have power to add to this list.

If the vernacular of a candidate is a language not included in the above list, he shall have an alternative paper of a somewhat advanced character in English.

(3), (4) and (5). Three of the following subjects, of which two at least must be from Group A:—

GROUP A.

One of the following languages:—

(i) Sanskrit, Pali, Arabic, Persian, Hebrew, Classical Armenian, Greek, Latin, French, German, Italian, Syriac.*
(ii) History.
(iii) Logic.

* Also Bengali, Assamese, Khasi, Hindi and Urdu for female candidates sanctioned by the Syndicate.

(*iv*) Mathematics.
(*v*) Elements of Civics.
(*vi*) Commercial Geography.
(*vii*) Commercial Arithmetic and Elements of Book-keeping.

GROUP B.

(*i*) Physics.
(*ii*) Chemistry.
(*iii*) Geography.
(*iv*) Physiology.
(*v*) Botany.
(*vi*) Zoology.
(*vii*) Geology.

There shall be two papers in each of the subjects enumerated under Groups A and B.

8. Every paper in every subject shall be of three hours, and shall carry 100 marks.

8. (*a*) Candidates may also be examined, if they so desire, in an additional subject included under Group A, provided they have not already taken the subject. In this optional subject there shall be two papers of three hours each.

9. The Syllabus in Mathematics and in all the subjects in Group B shall be the same as that prescribed for the Intermediate Examination in Science.

10. No practical examination will be held by the University in connection with subjects in Group B in the Intermediate Examination in Arts, but every student who desires to be examined in any such subject must produce a certificate from the Principal of his College to the effect that he has completed in an affiliated College the corresponding practical course prescribed by the Regulations.

11. The following are definitions of the limits of the above subjects :—

Paper I.—Poetry texts.

Paper II.—Prose texts.

Paper III.—(*a*) Essay, (*b*) Prosody and Rhetoric, (*c*) Questions on unseen passages from books of the same standard of difficulty as those recommended for the Matriculation Examination—

(*a*) shall carry 40 marks
(*b*) ,, ,, 20 ,,
(*c*) ,, ,, 40 ,,

VERNACULARS.

1. The course in Vernacular shall include select texts in prose and verse to be prescribed by the Syndicate on the recommendation of the Board of Studies concerned.

The Syndicate shall also draw up, on the recommendation of the Board, a small selection of books by notable authors as showing the standard up to which students will be expected to have read.

2. The Examination shall include:

(*a*) Questions on the subject-matter and on the language of the prescribed texts ...	40 *marks*
(*b*) An unseen passage to be summarised or amplified in the Vernacular ...	15 ,,
(*c*) Translation from English into Vernacular	15 ,,
(*d*) Questions on Composition	10 ,,
(*e*) An Essay in Vernacular—headings being given	20 ,,

3. The unseen passage shall not exceed in difficulty the

(*a*) Vernacular texts prescribed for the examination.

(*b*) Questions shall not be set on the history of language or literature of the Vernacular.

4. The Alternative Paper in English (for candidates whose Vernacular is a language not included in the prescribed list) shall include:

(*a*) questions on selected texts in prose and verse to be prescribed by the Syndicate on the recommendation of the Board of Studies in English; and

(*b*) questions on composition, including Rhetoric and Prosody.

SANSKRIT

1. The course in Sanskrit shall consist of selected passages in prose and verse. The texts in poetry shall include a portion of the Bhattikavya, and a portion either of the Raghuvansa or of the Kumar-Sambhava. The text in prose shall be taken from the Dasakumarcharita and the Mahabharata.

To the above list, other works may, from time to time, be added by the Syndicate on the recommendation of the Board of Studies in Sanskrit.

2. The course shall also include the elements of Sanskrit Grammar, of which a fuller knowledge shall be required than at the Matriculation Examination. A text-book in Grammar shall be prepared and prescribed by the University and be its property.

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3 The marks shall be distributed as follows:—

Paper I.

(*a*) Questions on the Poetry texts. Not more than 25 marks shall be assigned to mere translation from the set texts ... ... 50 *marks.*
(*b*) Questions on Grammar, including passages for correction ... ... 25 *marks.*
(*c*) Passages for translation from English into Sanskrit. 25 *marks.*

Paper II.

(*a*) Questions on the Prose texts. Not more than 15 marks shall be assigned to mere translation from the set texts ... ... 30 *marks.*
(*b*) Unseen Sanskrit passages for translation into English. 30 *marks.*
(*c*) Questions on Grammar ... ... 15 *marks.*
(*d*) Passages for translation from English into Sanskrit. 25 *marks*

Questions on the texts shall comprise—

(*a*) Passages from the set texts for translation into English.
(*b*) Questions on the subject-matter of the text.
(*c*) Questions on the language of the text and grammatical questions relating thereto.
(*d*) Passages for translation into English from such standard Sanskrit commentaries on the set texts as may be prescribed from time to time.

4. Unseen passages shall consist of simple prose not exceeding in difficulty the prose texts set for the Matriculation Examination.

No questions shall be set on Prosody or Rhetoric.

PALI.

1. The course in Pali shall consist of the whole of Anderson's Reader and such other selections as may, from time to time, be prescribed by the Board of Studies in Sanskritic Languages.

2. The course shall also include a knowledge of Pali Grammar of a higher standard than that required at the Matriculation Examination.

Grammars shall be recommended from time to time by the Board of Studies concerned.

3. The marks shall be distributed as follows:—

Paper I.

(a) Questions on the Poetry texts. Not more than 25 marks shall be assigned to mere translation from the set texts ... ... 50 *marks*.
(b) Grammatical questions ... ... 25 *marks*.
(c) Passages for translation from English into Pali. 25 *marks*.

Paper II.

(a) Questions on the Prose texts. Not more than 25 marks shall be assigned to mere translation from the set texts ... ... 50 *marks*.
(b) Unseen Pali passages for translation into English 30 *marks*.
(c) Grammatical questions ... ... 20 *marks*.

Questions on the texts shall comprise—

(a) Passages from the set texts for translation into English.
(b) Questions on the subject-matter, and
(c) Questions on the language of the text.

Unseen passages shall consist of simple prose not exceeding in difficulty the texts set for the Matriculation Examination.

ARABIC.

1. The course in Arabic shall consist of such portions as may be prescribed by the Syndicate, on the recommendation of the Board of Studies concerned of the following works:—

(1) Ithaq-uz Zahab by Abdul Momen al Maghrebi.
(2) Ikhwanus Safa.
(3) Al Fakhri by Ibni-i Taqtaqi.
(4) Muruj-uzzahab by Mas-i-udi.
(5) Ababud Dunya wad Din by Mawardi.
(6) Diwan by Hassan Ibn Thabit.
(7) Majaniul Adab, Parts III and IV.
(8) Nakhubul Mulah, Parts II and III.
(9) Maqalat-i Ali.
(10) Manjamut Tibr.
(11) Qoran.
(12) Qalyubi.
(13) Kalila wa Dimna.
(14) Tarikh Kamil by Ibn Ather.

To the above list other works may, from time to time, be added by the Syndicate on the recommendation of the Board of Studies in Arabic, Persian and Urdu.

The selections shall be prepared by and be the property of the University.

2. The course shall also include Arabic Grammar, of which a fuller knowledge shall be required than at the Matriculation.

A text-book in Grammar shall be prepared and prescribed by the University and be its property.

The Board of Studies concerned may make such modification in the list of books as may seem to them desirable.

The scope of the subject of each paper shall from time to time be defined by the Board concerned and the distribution of the marks may be modified in such manner as may seem desirable to the Board.

3. The marks shall be distributed as follows:—

Paper I.

(*a*) Questions on the texts.
Not more than 25 marks shall be assigned to mere translation ... ... 50 *marks*.

(*b*) Grammar, including passages for correction and unvocalised passages for vocalisation ... 30 *marks*.

(*c*) Simple English passages for translation into Arabic. 20 *marks*.

Paper II.

(*a*) Questions on the texts ... ... 30 *marks*.
Not more than 15 marks shall be assigned to mere translation.

(*b*) Unseen passages of Arabic for translation into English ... ... 30 *marks*.

(*c*) Questions on Grammar ... ... 15 *marks*.

(*d*) Simple English passages for translation into Arabic. 25 *marks*.

The passages for translation from English into Arabic shall in no case be translated portions of the prescribed text.

Questions on the texts shall comprise—

(*a*) Passages from the set texts into English
(*b*) Questions on the subject-matter, and
(*c*) Questions on the language of the text.

The unseen passages shall consist of simple prose not exceeding in difficulty the texts set for the Matriculation Examination.

No questions shall be set on Prosody or Rhetoric.

PERSIAN.

1. The Persian Course shall consist of select passages in Prose and Verse from any or all of the following works:

Prose.

(1) Anwar-i-Suhaili.
(2) Akhlaq-i-Muhsine.
(3) Tarikh-i-Iran by Mirza Hairal
(4) Tarikh-i-Sasaniyan.
(5) Akbarnama.
(6) Zafarnama.

Poetry.

(1) Kulliyat-i-Sadi.
(2) Kulliyat-i-Jami.
(3) Kulliyat Nizami.
(4) Kullyati-i-Zahir-i Faryabi.
(5) Kulliyat-i-Attar.
(6) Kûlliyat-i-Salman Sawji.
(7) Khamss-i-Niezami.

To the above list other works may from time to time, be added by the Syndicate on the recommendation of the Board of Studies in Arabic, Persian and Urdu.

The selections shall be prescribed and prepared by the University and be its property.

2. The course shall include Persian Grammar.

The Board of Studies concerned may make such modification in the list of books as may seem to them desirable.

The scope of the subject of each paper shall from time to time be defined by the Board concerned and the distribution of the marks may be modified in such manner as may seem desirable to the Board.

3. The marks shall be distributed as follows:

Paper I.

(*a*) Questions on Persian Poetry Texts ... 50 *marks.*
Not more than 25 marks shall be assigned to mere translation.
(*b*) Persian Grammar ... ... 25 *marks.*
(*c*) Passages of simple English Prose for translation intc Persian ... ... 25 *marks.*

In (*b*) passages shall be set for testing the practical application of grammatical rules.

Paper II.

(*a*) Questions on Persian Prose Texts ... 40 *marks*.
Not more than 20 marks shall be assigned to mere translation.
(*b*) Unseen passages for translation from Persian into English ... ... 35 *marks*.
(*c*) Passages of simple English Prose for translation into Persian ... ... 25 *marks*.

The passages for translation from English into Persian shall in no case be translated portions of the prescribed texts.

Questions on Persian texts shall comprise—

(*a*) Passages from the set text for translation into English.
(*b*) Questions on the subject-matter, and
(*c*) Questions on the language of the text.

The unseen Persian passage shall consist of easy prose and verse not exceeding in difficulty the text prescribed for the Matriculation Examination.

No questions shall be set on Prosody or Rhetoric.

ARMENIAN.

1. The Course in Classical Armenian shall consist of—

Prose.

Moses of Khoren's History of Armenia, Part II.

Poetry.

Elisho Vardapiet Doorian's Course of Classical Armenian, Part II.

The course shall also include Armenian Grammar, of which a fuller knowledge will be required than at the Matriculation Examination.

2. The marks shall be distributed as follows:—

Paper I.

(*a*) Questions on the Prose Texts ... 40 *marks*.
Not more than 20 marks shall be assigned to mere translation.
(*b*) Questions on Grammar, including passages containing errors for correction ... ... 20 *marks*.
(*c*) Passages for translation from English into Armenian. 40 *marks*.

Paper II.

(*a*) Questions on the Poetry Texts ... 40 *marks.*
Not more than 20 marks shall be assigned to mere translation.
(*b*) Unseen passages in Armenian for translation into English ... ... 30 *marks.*
(*c*) Passages for translation from English into Armenian. 30 *marks.*

Questions on the texts shall comprise—

(*a*) Passages from the set texts for translation into English,
(*b*) Questions on the subject-matter, and
(*c*) Questions on the language of the text.

The unseen passages shall consist of simple prose not exceeding in difficulty the text prescribed for the Matriculation Examination.

HEBREW.

The course in Hebrew shall consist of prescribed selections from Genesis, Isaiah, Ruth and the Psalms.

The marks in the two papers shall be distributed in the same proportions as in the case of Armenian.

GREEK.

1 The course in Greek shall consist of suitable selections from the following prose writers and poets, to be prescribed from time to time, by the Board of Studies concerned:—

Xenophon, Herodotus, Plato, Plutarch, Homer, Euripides and Sophocles.

The course shall also include Attic Greek Grammar

2. The marks shall be distributed as follows:—

Paper I.

(*a*) Questions on the Prose Selections ... 40 *marks*
Not more than 20 marks shall be assigned to mere translation.
(*b*) Questions on the Poetry Selections ... 40 *marks.*
Not more than 20 marks shall be assigned to mere translation.
(*c*) Questions on Grammar ... ... 20 *marks.*

Paper II.

(*a*) Translation of simple passages from English into Greek. 30 *marks.*
(*b*) Unseen passages in Greek for translation into English. 70 *marks.*

Questions on the texts shall comprise—

(a) Passages from the set texts for translation into English.
(b) Questions on the subject-matter, and
(c) Questions on the language of the text.

The unseen passages shall not exceed in difficulty the selections set for the Matriculation Examination.

LATIN.

1. The course in Latin shall consist of suitable selections from the following prose writers and poets, to be prescribed from time to time by the Board of Studies concerned:—

Sallust, Cicero, Livy, Virgil, Horace.

The course shall also include Latin Grammar.

2. The marks shall be distributed as follows:—

Paper I.

(a) Questions on the Prose Selections ... 40 *marks.*
(b) Questions on the Poetry Selections ... 40 *marks.*

In neither case shall mere translation of the set texts carry more than 20 marks.

(c) Questions on Grammar ... 20 *marks.*

Paper II.

(a) Translation of simple passages from English into Latin 40 *marks.*
(b) Unseen passages in Latin for translation into English. 60 *marks.*

Questions on the texts shall comprise—

(a) Passages from the set texts for translation into English.
(b) Questions on the subject-matter, and
(c) Questions on the language of the text.

The unseen passages shall not exceed in difficulty the selections set for the Matriculation Examination.

FRENCH.

1. The course in French shall consist of one work in prose and selections in verse from one or more writers, which shall be prescribed from time to time by the Board of Studies concerned.

The course shall include French Grammar.

2. The marks shall be distributed as follows:—

Paper I.

(a) Questions on the prescribed texts, prose and verse 50 *marks*

Not more than 25 marks shall be assigned to mere translation.

(*b*) Questions on Grammar ... ... 20 *marks*

(*c*) Passages for translation from English into French 30 *marks*.

Paper II.

(*a*) Unseen passages of French prose and verse for translation into English ... ... 70 *marks*.

(*b*) Passages for translation from English into French. 30 *marks*.

Questions on the text shall comprise—

(*a*) Passages from the set texts for translation into English.
(*b*) Questions on the subject-matter, and
(*c*) Questions on the language of the text.

GERMAN.

1 The course in German shall consist of one work in prose and selections in verse from one or more writers, which shall be prescribed from time to time by the Board of Studies concerned. The course shall include German Grammar.

2. The marks in the two papers shall be distributed in the same proportion as in the case of French.

HISTORY.

The subject shall be—

(*i*) The History of England, from the earliest times to the end of the reign of Victoria.
(*ii*) The History of Ancient Greece, from the earliest times to the Roman Conquest, 146 B.C.
(*iii*) The History of Rome, from the earliest times to the extinction of the Western Empire, 476 A.D.

Paper I.—History of England.
Paper II—History of Greece and Rome

LOGIC.

Definition, Scope, and Use of Logic. Its relation to Metaphysics and Psychology. Immediate and Mediate knowledge. Reasoning in general. Division of Logic into Formal and Mate-

The following Syllabus in Bengali has been prescribed by the Syndicate for the Intermediate Examination in Arts for Female Candidates:—

1. The course in Bengali shall consist of books in prose and verse.
2. The course shall also include the Grammar of the Bengali language of which a fuller knowledge shall be required than for the Matriculation Examination. A text-book in grammar shall be prescribed or recommended,

rial Formal Logic. Principles of Formal Reasoning: Identity, Contradiction, Sufficient Reason. Axioms and Postulates. Language and Thought. Realism, Conceptualism and Nominalism, and their bearing on the nature of the logical processes.

Concept and Term. Abstraction. Use of names. Denotation and Connotation. Extension and intension. Distribution. Definition, with is limits and formal conditions. Logical Division and its conditions. Various Divisions of Terms, and their significance.

Judgment and the Proposition. Theory of Predication and Import of Propositions. Essence. Genus. Species. Differential Property. Accident. Quantity and Quality. Modality. Simplification of Propositions. Various Divisions of Propositions and their significance. Opposition of Proposition, and its practical applications.

Inference in general. Immediate and Mediate Inference, Deductive and Inductive Inference.

Immediate Inference, and its different forms. Conversion, Obversion, Contraposition, Inversion, Opposition, with their practical applications.

Deductive Inference. Premises and Middle Terms. Syllogism: its structure and condition. The canons. Figures and Moods, and their rules. Reductions. Hypothetical and Disjunctive Syllogism with their rules. Dilemma. Compound Syllogisms and Trains of Reasoning. Practical application of the Syllogism to express and test reasonings.

Fallacies in Deductive Reasoning.

Material Logic. Nature of truth. Knowledge and Reality. Sources of knowledge. Perception. Inference. Authority. Necessary Truth.

3. The marks shall be distributed as follows :—

Paper I.

(*a*) Questions on the poetry texts. Not more than 25 marks shall be assigned to mere translation from the set texts ... 50 *marks.*

(*b*) Questions on Grammar including passages for correction 25 *marks.*

(*c*) Easy unseen passages in modern Bengali Prose for translation into English ... ... 25 *marks.*

Paper II.

(*a*) Questions on the prose texts. Not more than 15 marks shall be assigned to mere translation from the set texts ... 30 *marks.*

(*b*) Unseen Bengali passages for explanation ... ... 30 *marks.*

(*c*) Bengali passages for translation into English ... 25 *marks.*

(*d*) Questions on Grammar ... ... 15 *marks.*

Questions on the text shall comprise—

(*a*) Passages from the texts for translation into English,

(*b*) Questions on the subject-matter of the text, and

(*c*) Questions on the language of the text and grammatical questions relating thereto.

4. Unseen passages shall consist of simple prose not exceeding in difficulty the prose texts set for the Matriculation Examination.

No questions shall be set on Prosody or Rhetoric.

Generalization and the General Idea.

Science. Laws of Nature. Uniformity of Nature.

The grounds and conditions of Inductive Inference. Causality. Origin of belief in universal causation. Energy and conservation. Causes and Conditions. Plurality of Causes. Composition of Causes, and Intermixture of Effects.

Discovery and Proof. Hypotheses, their uses and conditions. Theory. Verification. Observation and Experiment and their uses. The Experimental methods and their use, with examples of their application. Fallacies of Observation.

Nature, place and use of the Inductive Method. Perfect and Imperfect, Complete and Incomplete Induction Inference from Analogy. Inference from simple Enumeration. Inductive Probability; Chance and its Elimination. Scientific Induction. Processes simulating Induction. Fallacies in Inductive Reasoning.

Classification, Natural and Artificial, and its conditions. Relation of Classification to Division. Definition, and its material conditions. Description. Type. Errors in Classification and Definition. Terminology and Nomenclature.

Nature, place and use of the Deductive Method. Relation of Induction and Deduction; Nature, function and value of the Syllogism. Inductive and Deductive Sciences. The actual Method of Scientific Progress. Demonstration. The World as a system of law. Explanation, and its limits.

ELEMENTS OF CIVICS.

Scope of Civics—Definition of Citizen—His qualifications, rights and duties—Definition of rights and duties—Hindrances to good Citizenship.

The family, village, the towns and cities, the country and the Empire in relation to Citizenship.

Liberty—Civil and Political Liberty—Liberty and Authority—The idea of a State—Constitution of a State—Distinction between State and Government—Functions of Government.

The general organization of the Government of India—The Secretary of State for India—Central and Provincial Governments—Their powers and duties—Relations between them.

Popular Government—Meaning of popular control—Representative democracy—Public opinion—Its influence on popular Government—Merits and defects of popular Government—Responsibility to be combined with freedom in popular Government.

Local Self-Government—Constitutions, powers and duties of Municipalities, District Boards—Local and Union—The need for maintaining high standard of ability and efficiency, and honesty in municipal administration.

Municipal and rural problems—Water supply, drainage, sanitation, public health—Primary and vocational education—Milk supply—Co-operative efforts.

Importance of Agriculture—Cottage industries—Machine industries.

Railways—Irrigation works, telegraphs, post and other means of communication.

Principal sources of revenue.

Famine—What it means—Its prevention and relief.

Condition of the Masses—Agricultural indebtedness.

Subject-matter of Economics—Production—Its factors—Distribution—Exchange—Consumption—Principles of taxation—The economic environment of the citizen.

Fundamental Economic Concepts—Value, wealth, capital, income, utility, demand, supply.

COMMERCIAL GEOGRAPHY.

Students of Commercial Geography will be expected to possess a knowledge of General Geography up to the Matriculation standard. The course in Commercial Geography shall be divided into two papers—one paper to be devoted to countries other than India and the other exclusively to India.

Syllabus:—

General Economic Geography:—The bases of Commercial Geography. Its relation to other Sciences. Trade winds and ocean currents. The Geographical distribution of commercial products. Physical conditions affecting their production. Commodities dependent on climate. Monsoons. Agricultural products Forests and fisheries. Mineral products. Manufactures.

Regional Economic Geography:—Trade routes. Means of transport and communication. Ports and harbours. Industrial town and commercial centres. Chief products of important countries—agricultural, mineral, and manufactured. Principal imports and exports

India:—Detailed study of physical features—climate, Monsoons. Soils and soil erosion—Location of chief agricultural, industrial and mineral products—Movements of trade—internal and foreign—Transport and communications. Competition between waterways and land transport. Ports and harbours.

COMMERCIAL ARITHMETIC AND ELEMENTS OF BOOK-KEEPING.

1. Principles of Arithmetic. Commercial Arithmetic.
   - (a) Arithmetical Operations.
   - (b) Integers—Fractions: Vulgar and Decimal.

(c) Contracted Methods of Multiplication, Division and Square root—Decimalisation of money—Calculation of cost.

(d) Ratio—Proportion—Proportional Parts—Percentage—Averages and Statistics.

(e) Simple Mensuration—Squares, Rectangles, Triangles, and Rectilineal figures—Circles, Segments, Sectors—Prisms, Cylinders—Pyramids. Cones—Spheres—Simple Equations and their application to Inverse Problems. Application to Inverse Problems.

(f) Indian, British and Metric Systems of Weights and Measures.

(g) Logarithms and their applications

(h) Mixtures—Profit and Loss.

II. Trade.

(a) Inland Trade—

(1) Invoices and Bills.
(2) Payment for Goods.
(3) Percentage—Gains and Losses.
(4) Partnerships—Bankruptcies.

(b) Import Trade—

(1) Importing Operation.
(2) Expenses Incurred.
(3) Customs and Excise.

(c) Export Trade—

(1) Methods of Exporting Goods.
(2) Kinds of Invoices and their Preparation.
(3) Foreign Weights and Measures.
(4) Tables of Equivalent and Values.
(5) Foreign Currency.

III. Finance.

(a) Coinage Systems—

(1) Mint Par of Exchange.
(2) Specie Point.

(b) Banking and Exchange—

(1) Payments through Post-Office, the Treasury and the Banks.
(2) Bills of Exchange—Telegraphic Transfers—Promissory Notes.
(3) Discount—True, Banker's, Commercial—Discounting and Retiring of Bills.
(4) Function of a bill of Exchange.

(5) Foreign Exchanges—Course of Exchange.
(6) Current Accounts.

(c) Stock Exchange—
(1) Stock Exchange Transactions—Stocks and Shares.
(2) Contango and Backwardation.
(3) Speculation.
(4) London Stock Exchange—Calcutta Stock Exchange.

(d) Annuities—
(1) Interest, Simple and Compound.
(2) Discount, Present Worth and Amount.
(3) Commission and Brokerage.
(4) Kinds of Annuities.
(5) Amount and Present Value of an Annuity.
(6) Leases and Sinking Funds.
(7) Life Annuities.

Elements of Book-keeping

1. Book-keeping—Its Principles.
   (a) Double Entry—Its theory, scientific methods, adaptability to all classes of commercial transactions.
   (b) Single Entry—Its meaning, principles and defects.
2. Books of Accounts—
   (a) Journal.
   (b) Ledger.
   (c) Cash Book (with or without Bank and Discount columns).
   (d) Bought, Sold and Bill Books.
3. Methods of Book-keeping—
   (a) Journalising.
   (b) Posting.
4. Preparation of Accounts and Balance Sheet—
   (a) Trial Balance.
   (b) Journalising adjustment—Depreciation, Bad Debts, Outstanding Incomes and Expenses. Expenses in Advance, Writing off, Fictitious Assets, and creating Reserve Accounts.
   (c) Journalising Closing Entries.
   (d) Closing the Ledger.
   (e) Preparation of Manufacturing Account, Trading Account, Profit and Loss Account, Profit and Loss Appropriation Account.
   (f) Preparation of the Balance Sheet.
5. Distinction between Receipts and Payments, Account and Revenue Accounts, items of Receipts and Payments and

items of Income and Expenditure on the one hand, and of Assets and Liabilities on the other.

6. Treatment of Transactions connected with—

(*a*) Bills of Exchange and Promissory Notes.
(*b*) Goodwill.
(*c*) Consignments, Outwards and Inwards.

7. Partnerships Accounts (with the exception of dissolution or winding up of a partnership business)—Proprietors' Current Account.

8. Company Accounts (without the use of the Private Ledger)—

(*a*) Formation of Joint-Stock Companies—Difference between a firm and a Joint-Stock Company—Difference between a Joint-Stock Company with Limited Liability and one with Unlimited Liability—Difference between a Public Limited Company and a Private Limited Company—Memorandum and Articles of Association, and Prospectus.
(*b*) Statistical Books which a Joint-Stock Company must keep in order to comply with the requirements of the Indian Companies Act.
(*c*) Entries, relating to Shares—
  (1) Application, Allotment and Calls.
  (2) Forfeited Shares.
  (3) Transfer of Shares.
(*d*) Preparation of Accounts and Balance Sheet, with easy adjustments.

9. Explanation of the following Commercial Terms—

Account, Debtor, Creditor, Debit, Credit, Balance, Gross and Net Profit, Interest, Discount, Asset, Liability, Capital, Trial Balance, Balance Sheet, Solvent, Insolvent, Composition, Bad Debts, Posting Folio, Petty Cash, Cheque, Bill of Exchange, Accepting, Honouring, Dishonouring, Discounting, Noting, Retiring, Invoice Receipt Voucher, Debit Voucher, Debit Note, Credit Note, Rebate, Commission, Account Sales, Depreciation, Premium, Provision, Charges, Brokerage, Bill of Sale, Personal Account, Impersonal Account, Real Account, Nominal Account

GENERAL.

1. In order to pass the Intermediate Examination in Arts, a candidate must obtain—

In English	... ...	108 *marks*
In the Vernacular or the alternative paper	...	36 *marks.*
In each of the remaining subjects taken up	...	60 *marks.*
And in the aggregate ...	... ...	340 *marks.*

2. In order to be placed in the first division a candidate must obtain 500 marks.

In order to be placed in the second division, 400 marks.

The names of candidates placed in the first division shall be published in order of merit

If a candidate has passed in the compulsory subject and in the aggregate, the marks in excess of 60 obtained by him in the optional subject, if any, shall be added to his aggregate and the aggregate so obtained shall determine his division and his place in the list.

3. Any candidate who has failed in one subject only, and by not more than 5 per cent. of the full marks in that subject, and has shown merit by gaining 500 in the aggregate, shall be allowed to pass In order to determine the division in which such a candidate will be placed and his place in the division, the number of marks by which he has failed in one subject shall be deducted from his aggregate.

4. If the Moderators are of opinion that, in the case of any candidate not covered by the preceding Regulations, considera-tion ought to be allowed by reason of his high proficiency in a particular subject, or in the aggregate, they shall report the case to the Syndicate, and the Syndicate may pass such candidate.

5. Candidates who, after passing the Intermediate Examin-ation in Science, appear for the Intermediate in Arts, shall be required, in order to pass, to obtain 36 per cent. in each subject for which they present themselves in the latter examination.

CHAPTER XXXII.

BACHELOR OF ARTS.

1. An examination for the degree of Bachelor of Arts shall be held annually in Calcutta, and at such other places as shall from time to time be appointed by the Syndicate, and shall commence at such time as the Syndicate shall determine, the approximate date to be notified in the Calendar.

2. Any under-graduate of the University may be admitted to the examination provided he has prosecuted a regular course of study for not less than two academical years after passing the Intermediate Examination in Arts or Science in a College or Colleges affiliated to the University in the subjects which the candidate takes up.

3. Every candidate sent up for the B.A. Examination by an affiliated College shall produce a certificate (*a*) of good conduct, (*b*) of diligent study, (*c*) of having satisfactorily passed the College periodical examinations and other tests, and (*d*) of probability of passing the Examination. Every candidate shall send to the Registrar his application, with a certificate in the form prescribed by the Syndicate at least six weeks before the date fixed for the commencement of the Examination. If he desires to be examined for Honours in any subject, he shall name the subject in his application. If a candidate offers himself for Examination in Hebrew, Armenian, French or German, he shall be required to give the Registrar notice of the fact twelve months before the date of the Examination.

4. A fee of Rs. 45 shall be forwarded by each candidate with his application, provided that a candidate who applies for admission to the Honours Examination shall pay an additional fee of Rs. 10.

A candidate who fails to pass, or to present himself for Examination shall not be entitled to claim a refund of the fee. A candidate who fails to pass may be admitted to one or more subsequent Examinations for the Degree of Bachelor of Arts on payment of a like fee of Rs. 45 or Rs. 55 as the case may be on each occasion, provided he produces a certificate from the Head of an affiliated College, showing that he has prosecuted a regular course of study for one academical year since the date of the last Examination, in each of the subjects in which he is to be examined.

5. The examination for the degree of Bachelor of Arts shall be conducted by means of printed papers, the same papers being used at every place at which the Examination is held.

6. Every candidate shall be examined in the following subjects:—

(1) English.

(2) One of the following Vernaculars:—Bengali, Hindi, Uriya, Assamese, Burmese, Urdu, Modern Armenian, Nepali (Parbatia), Maithili, Modern Tibetan, Khasi, Marathi, Gujrathi, Telugu, Tamil, Kanarese, Malayalam, Sinhalese, Portuguese.

The Syndicate shall have power to add to this list.

For candidates whose vernacular is English or an Indian vernacular not included in this list, there shall be an advanced paper in English which shall be treated as separate from the Examination in English.

(3) and (4) Two of the following subjects, one of which at least must belong to Group A:—

A.

(I) One of the following languages:—Sanskrit, Pali (including a knowledge of Sanskrit up to the Matriculation standard), Arabic, Persian (including a knowledge of Arabic up to Intermediate standard for Honours Course only), Hebrew, Classical Armenian, Greek, Latin, French, German, Syriac, Bengali, and Urdu.
(II) History.
(III) Political Economy and Political Philosophy.
(IV) Mental and Moral Philosophy.
(V) Mathematics.
(VI) Linguistics.

B.

(I) Physics.
(II) Chemistry.
(III) Physiology.
(IV) Botany.
(V) Zoology.
(VI) Anthropology.

No candidate shall be allowed to take up Mental and Moral Philosophy unless he has taken up Logic in the Intermediate Examination in Arts. No candidate shall be allowed to take up any subject in Group B or Mathematics, who has not taken up the corresponding subject in the Intermediate Examination.

7. A candidate may take the Pass Course in four subjects or he may take the Pass Course in three subjects and the Honours Course in one subject only; but there shall be no Honours Course in the Vernacular.

8. There shall be three papers in the Pass Course and six papers in the Honours Course, in every subject except the Vernacular. In that subject only one Pass paper shall be set. Each paper shall be of three hours and shall carry 100 marks.

9. In the Syllabuses hereinafter defined Papers I, II and III shall be on the Pass Course, but questions set for Honours candidates need not be identical with those set for Pass candidates. Papers IV, V and VI shall be for Honours candidates only.

10. As soon as possible after the Examination, the Syndicate shall publish a list of the candidates who have passed in the Pass Course, arranged in alphabetical order, together with a list of those who have obtained Honours in each branch, arranged in two classes, both in order of merit. Each successful

candidate shall receive with his degree of B.A. a certificate in the form entered in Appendix A.

11. The syllabuses in Mathematics and in the subjects under Group B shall be identical in the B.A. and B.Sc. Examinations and will be found under the B.Sc. Regulations.

There shall be a practical Examination in all subjects included in Group B.

12. The following syllabuses define the subjects prescribed for the B.A. Examination. Books shall be recommended, where necessary, by the Board of Studies concerned.

ENGLISH.

1. In Papers I, II, IV and V, not more than half the marks shall be given for explanation of passages set from the prescribed texts.

2. In these papers, questions may be asked to test the candidate's appreciation of the books he has studied in the course, but questions encouraging the mere reproduction of literary criticisms shall not be set.

3. The subjects and marks shall be respectively divided as follows:—

Paper I.

Poetry and Drama texts ... ... 100 *marks.*

Paper II.

Prose texts ... ... 100 ,,

In regard to the subject of these two papers students shall be expected to possess a general knowledge of the life and literary career of the authors whose works are prescribed.

Paper III.

(*a*) Essay ... ... 50 *marks.*
(*b*) Unseen passages from authors or works of the same standard of difficulty as those prescribed for the Intermediate Examination ... ... 50 ,,

4. Additional Honours Papers.

Paper IV.

(*a*) Additional Poetry and Drama texts ... 75 ,,
(*b*) Additional unseen passages in Poetry and Drama ... ... 25 ,,

Paper V.

(*a*) Additional Prose texts ... ... 75 *marks.*
(*b*) Additional unseen passages in Prose ... 25 ,,

In Papers IV and V the unseen passages shall not be of a higher standard of difficulty than the prescribed texts.

Paper VI.

(*a*) Philology of the English Language. ... 50 *marks.*
(*b*) General History of English Literature ... 50 ,,

5. No texts or unseen passages shall be taken from Spenser or from authors earlier than the Elizabethan period.

VERNACULARS.

1 The course in Vernacular shall include select texts in prose and verse to be prescribed by the Syndicate on the recommendation of the Board of Studies concerned.

The Syndicate shall also draw up, on the recommendation of the Board, a small selection of books by notable authors as showing the standard up to which students will be expected to have read.

2. The examination shall include—

(*a*) Questions on the subject-matter and on the language of the prescribed texts ... 40 *marks.*
(*b*) An unseen passage to be summarised or amplified in the Vernacular ... 15 ,,
(*c*) Translation from English into Vernacular ... 15 ,,
(*d*) Questions on Composition ... ... 10 ,,
(*e*) An Essay in Vernacular—headings being given ... ... 20 ,,

3. The unseen passage shall not exceed in difficulty the

(*a*) Vernacular texts prescribed for the examination.

(*b*) Questions shall not be set on the history of language or literature of the Vernacular.

4. The Alternative Paper in English (for candidates whose Vernacular is a language not included in the prescribed list) shall include:

(*a*) Questions on selected texts in prose and verse to be prescribed by the Syndicate on the recommendation of the Board of Studies in English; and

(*b*) Questions on composition including Rhetoric and Prosody.

5. A candidate who takes Bengali or Urdu as a subject, under Group A (I) in sub-sections 3 and 4, section 6, will be

examined in an additional paper in vernacular, in lieu of the compulsory paper, as outlined in sub-section 2. The marks in that paper shall be distributed as follows:—

History of Literature	... ...	45 *marks*.
History of Language	... ...	25 ,,
Essay	... ...	30 ,,

ALTERNATIVE PAPER IN ENGLISH.

The special paper shall be a test in English Composition and on a general knowledge of the subject-matter of a small number of standard works in English (not exceeding three) to be prescribed by the Syndicate from time to time on the recommendation of the Board of Studies in English.

SANSKRIT.

The Pass Course in Sanskrit shall comprise the following:—

Paper I.

(*a*) Poetry texts, namely, selected portions of Manu and selected portions of one of the following:—
Kiratarjuniya
Sisupalabadha ... ... 75 *marks*.

(*b*) Translation from English into Sanskrit ... 25 ,,

Paper II.

(*a*) Drama texts, namely, two of the following:—
Sakuntala.
Uttararamacharita.
Mudrarakshasa.
Ratnavali ... ... 75 *marks*.

(*b*) Translation from English into Sanskrit ... 25 ,,

Paper III.

(*a*) Prose passages from unprepared Sanskrit books for translation into English ... 30 ,,

(*b*) Questions on Sanskrit Grammar, including passages for correction ... ... 40 ,,

(*c*) Outlines of the History of Sanskrit Literature ... ... 30 ,,

The Honours Course in Sanskrit shall comprise, in addition to the Pass Course, the following:—

Paper IV.

(*a*) Selected portions of Bhattikavya and Kadambari ... ... 75 *marks*.

(*b*) Translation from English into Sanskrit ... 25 ,,

Paper V.

Selected Hymns from the Rigveda, with Sayana's Commentary thereon ... 100 *marks.*

Paper VI.

Grammar and Rhetoric, namely—

(*a*) Siddhanta Kaumudi—Karaka and Samasa 60 *marks.*
(*b*) Dandi—Kavyadarsa. Sahitya Darpan, Chapter VI ... ... 40 ,,

In the first, second, fourth, and fifth papers, the questions on the text shall include—

(*i*) Passages from the prescribed texts for translation into English (to carry not more than 25 marks in any paper).
(*ii*) Questions on the subject-matter and on the language of the prescribed texts.
(*iii*) Questions on Grammar and Prosody (but not Rhetoric), arising out of the prescribed texts.
(*iv*) Passages for translation or discussion in English, taken from standard Sanskrit commentaries on the prescribed texts, to be named by the Syndicate from time to time

In the third paper the unseen passages shall not exceed in difficulty the prose texts set for the Intermediate Examination in Arts.

The Syndicate shall from time to time cause to be prepared and prescribed a text-book in Sanskrit Grammar.

In the sixth paper, questions will be set to test the ability of candidates to apply (*a*) the Rules of Panini on Karaka and Samasa, and (*b*) the rules of Rhetoric to passages taken from the prescribed texts.

The Syndicate shall, upon the recommendation of the Board of Studies, select the texts in accordance with the syllabus and may also recommend books or specify editions to indicate more fully the extent and standard of knowledge required in any paper.

The Syndicate shall have power to add to the list of specified books other books from time to time on the recommendation of the Board of Studies in Sanskrit.

BENGALI.

The Pass Course in Bengali shall comprise the following:—

Paper I.

Drama Texts	... ...	75 *marks.*
Rhetoric and Grammar	... ...	25 ,,

Paper II.

Old Poetry Texts	... ...	50 *marks.*
Modern Poetry Texts	... ...	50 ,,

Paper III.

Prose Texts (Old and Modern)	... ...	80 *marks.*
Translation from English into Bengali	...	20 ,,

URDU.

The Pass Course in Urdu shall comprise the following:—

Paper I.

Drama Texts	... ...	75 *marks.*
Rhetoric and Grammar	... ...	25 ,,

Paper II.

Old Poetry Texts	... ...	50 *marks.*
Modern Poetry Texts	... ...	50 ,,

Paper III.

Prose Texts (Old and Modern)	... ...	80 *marks.*
Translation from English into Urdu	...	20 ,,

ARABIC.

1. The Pass Course in Arabic shall comprise the whole or selected portions of the following works:—

Any or all of the following works:—

PASS COURSE.

(1) Majmaul Bahrain by Yazeji.
(2) Fakehatul Khulafa by Ibn Arab Shah.
(3) Akhbarul Tiwal by Dinawari.
(4) Almustatrif by Abshahi.
(5) Tarikhul Yemini.
(6) Diwan by Ibu-un-Nabih.
(7) Diwan by Abi Firas.

(8) Jawahirul Balaghat by Hashemi.
(9) Majmu'ul Adab by Yaziji.
(10) Majaniul Adab, Parts V and VI.
(11) Nakhubul Mulah, Parts IV and V.
(12) Hamasa.
(13) Diwans of Mutanabi.
(14) Abul Atahiya.
(15) Quoran with Jalalayn.
(16) Hariri.
(17) Tarikh Tabari.
(18) Qazini's Geography.

The course shall include Arabic Grammar, according to the modern method.

2. The Honours Course shall include, in addition to the above, the whole or selected portions of the following works:—

HONOURS COURSE.

(1) Jafsir by Abu Sawud Imadi.
(2) Al Jamius Saghir by Sayuti.
(3) Al Iqdul Farid by Ibn Abd Rabbihi.
(4) Muqaddiman by Ibn Khaldun.
(5) Qualaidul Iqyan by Ibn Khaqan.
(6) Asbabut Tarab by Shaikha.
(7) Mukh Tasar-ul-Maaui by Taftazani.
(8) Al Mufadh-dhaliyyat by Dhabbi.
(9) Diwan by Imraul Qais.
(10) Diwan by Khansa.
(11) Sub Muallaqat
(12) Banat Suad.
(13) Ibu-i-Farid.
(14) Qoran with Baydhawi and Zamakhshari.
(15) Serah Ibu Hisham.

The Honours Course shall also include the elements of Arabic Prosody and Rhetoric; the outlines of Mahomedan History down to the fall of the Abbasid Caliphate; and a general knowledge of the History of Arabic Literature.

The Board of Studies concerned may make such modification in the list of books as may seem to them desirable.

The scope of the subject of each paper shall from time to time be defined by the Board concerned and the distribution of the marks may be modified in such manner as may seem desirable to the Board.

3. The subjects and the marks shall be distributed as follows:—

Paper I.

Questions on the Poetry texts ... ... 100 *marks.*

Paper II.

Questions on the Prose texts ... ... 100 ,,

Paper III.

(*a*) Unseen passages for translation into English ... ... 70 ,,
(*b*) Short English sentences for translation into Arabic ... ... 30 ,,

The unseen passages in this paper shall be of no greater difficulty than the texts prescribed for the Intermediate Examination.

Paper IV.

(*a*) Questions on the additional Poetry texts ... 80 *marks.*
(*b*) Translation from English into Arabic ... 20 ,,

Paper V.

(*a*) Questions on the additional Poetry texts . . 80 *marks*
(*b*) Translation from English into Arabic ... 20 ,,

Paper VI.

(*a*) Questions on Mahomedan History ... 30 *marks.*
(*b*) Questions on the History of Arabic Literature ... ... 40 ,,
(*c*) Questions on Rhetoric and Prosody ... 30 ,,

In Papers I, II, IV and V, questions on the texts shall comprise—

(*a*) Passages of the set texts for translation into English
(*b*) Questions on the subject-matter, and
(*c*) Questions on the Grammar of set passages.

In no paper shall more than one-fourth of the marks of these questions be assigned to mere translation of the set passages.

PERSIAN.

1 The Pass Course in Persian shall comprise the whole or selected portions of the following works:—

Any or all of the following works:—

Pass Course.

Prose.

(1) The Siyasat Nama of Nizam-ul-Mulk.
(2) The Shamsa wa Qahquha.
(3) The Tarik-i-Zahangusha-i Nadir
(4) The Waqaya-i Nimat Khan-i' Ali.
(5) The Masalikul Muheinin.
(6) The Aruz-i Saifi.

Poetry.

(1) The Shahnama of Firdausi.
(2) The Diman-i of Hafiz.
(3) The Masnawi of Jalal-uddin Rumi
(4) The Kulliyat of Qaani.
(5) The Diman-i wisal-i Shirazi.
(6) The Naldaman of Faizi.

The Pass Course shall include the elements of Persian Prosody and Rhetoric.

2. The Honours Course shall include, in addition to the above, the whole or selected portions of the following works:—

Honours Course.

Prose.

(1) Insha-i Abulfaze
(2) Miraj-us Saadat.
(3) Chahar Maqala of Aruz-i Nizami.
(4) Insha-i Taher-i Wahid.

Poetry.

(1) Gulshan-i Raj.
(2) Diman-i Sail.
(3) Makhzau-ul Asrar.

Prose—Milindapañha.

The course shall include a knowledge of Sanskrit Grammar * up to the Matriculation standard, besides a knowledge of Pali Grammar and the elements of Comparative Philology.

2. The Honours Course shall comprise in addition to the above:—Mahavamsa and Díghanikáya.

The Honours Course shall include a knowledge of Sanskrit Grammar up to the Intermediate standard, and of the History of Buddhism with special reference to India.

The subjects and the marks shall be distributed as follows:—

Paper I.

(*a*) Questions on the Poetry texts ... 70 *marks.*
(*b*) Unseen passages of Pali poetry for translation into English ... ... 30 *marks.*

Paper II.

(*a*) Questions on the Prose texts ... ... 70 *marks.*
(*b*) Unseen passages of Pali prose for translation into English ... ... 30 *marks.*

Paper III.

(*a*) Questions on Sanskrit Grammar† ... 15 *marks.*
(*b*) Questions on Pali Grammar ... ... 15 *marks.*
(*c*) Questions on Comparative Philology ... 40 *marks.*
(*d*) Simple English passages for translation into Pali 30 *marks.*

Paper IV.

(*a*) Questions on the additional Poetry texts ... 40 *marks.*
(*b*) Unseen passages of Pali poetry for translation into English ... ... 30 *marks.*
(*c*) Questions on Sanskrit Grammar ... 30 *marks.*

Paper V.

(*a*) Questions on the additional Prose texts 40 *marks.*
(*b*) Unseen passages of Pali prose for translation into English ... ... 30 *marks.*
(*c*) Questions on Sanskrit Grammar ... 30 *marks.*

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* In the case of Burman students, a knowledge of Sanskrit Grammar will not be demanded for the Pass Course in Pali.

† Alternative question on Pali Grammar instead of questions on Sanskrit Grammar, will be set in Paper III for Burman students.

Paper VI.

(*a*) Questions on the History of Buddhism ... 50 *marks.*
(*b*) Questions on Comparative Philology ... 50 *marks.*

In Papers I, II, IV and V, questions on the text shall comprise—

(*a*) Passages of the set texts for translation into English,
(*b*) Questions on the subject-matter, and
(*c*) Questions on the Grammar of the set passages.

In no paper shall more than one-fourth of the marks of these questions be assigned to the mere translation of set passages.

HEBREW.

1. The Pass Course in Hebrew shall comprise specified portions of the Historical books, the Psalms and Proverbs. The Course shall include Jewish History.

2. The Honours Course shall include, in addition to the above, two Prophetical books, and the History of the Hebrew Language and Literature.

3. The marks shall be distributed as follows:—

Paper I.

(*a*) Questions on the specified Historical texts 70 *marks.*
(*b*) Unseen passages from Historical books for translation into English ... ... 30 *marks.*

Paper II.

(*a*) Questions on the Psalms and Proverbs ... 70 *marks.*
(*b*) Unseen passages from poetical books for translation into English ... ... 30 *marks.*

Paper III.

(*a*) English passages for translation into Hebrew 50 *marks.*
(*b*) Questions on the History of the Jews, and on the literary history of the Bible ... ... 50 *marks.*

Paper IV.

(*a*) Questions on the specified Prophetical books 70 *marks.*
(*b*) English passages for translation into Hebrew 30 *marks.*

Paper V.

(*a*) Unseen passages from the Historical books for translation into English ... ... 40 *marks.*

(b) Unseen passages from the Prophetical books for translation into English ... ... 30 *marks.*
(c) English passages for translation into Hebrew 30 *marks.*

Paper VI.

(a) Questions on the Hebrew Language and Literature 50 *marks.*
(b) Questions on Jewish History ... ... 50 *marks.*

In Papers I, II, and IV, questions on the texts shall comprise—

(a) Passages of the set texts for translation into English,
(b) Questions on the subject-matter, and
(c) Questions on the Grammar of the set passages.

In no paper shall more than one-fourth of the marks of these questions be assigned to the mere translation of set passages.

ARMENIAN.

1. The Pass Course in Armenian shall consist of the following texts:—

Poetry.

Bagratoonie's translation of "Paradise Lost," Books IX, X, XI and XII.

Prose.

Agathangalo's History, Parts I and III, Moses of Khoren's History.
The course shall include the History of Armenia.

2. The Honours Course shall include in addition to the above—.

Poetry.

Bagratoonie's Haik Dientsazn, Books I, II, III, IV and V.

Prose.

John Catholicus.
Elishe.

The course shall include the History of Armenian Literature and the elements of Armenian Philology.

The marks shall be distributed as follows:—

Paper I.

(a) Questions on the Poetry texts ... ... 70 *marks.*

(*b*) Unseen passages of Armenian Poetry for translation into English ... ... 30 *marks.*

Paper II.

(*a*) Questions on the prose texts ... ... 70 *marks.*
(*b*) Unseen passages of Armenian Prose for translation into English ... ... 30 *marks.*

Paper III.

(*a*) English passages for translation into Classical Armenian 50 *marks.*
(*b*) Questions on Armenian Grammar ... 20 *marks.*
(*c*) Questions on the History of Armenia .. 30 *marks.*

Paper IV.

(*a*) Questions on the additional Poetry texts ... 70 *marks.*
(*b*) English passages for translation into Armenian 30 *marks.*

Paper V.

(*a*) Questions on the additional Prose texts ... 70 *marks.*
(*b*) English passages for translation into Armenian 30 *marks.*

Paper VI.

(*a*) Unseen passages in Armenian for translation into English ... ... 40 *marks.*
(*b*) Questions on the History of Armenian Literature 30 *marks.*
(*c*) Questions on Armenian Philology ... 30 *marks.*

In Papers I, II, IV and V, questions on the texts shall comprise—

(*a*) Passages of the set texts for translation into English,
(*b*) Questions on the subject-matter, and
(*c*) Questions on the Grammar of the set passages.

In no paper shall more than one-fourth of the marks of these questions be assigned to the mere translation of set passages.

GREEK.

1. The Pass Course in Greek shall consist of suitable selections from the following authors to be prescribed from time to time by the Board of Studies concerned:—

Plato, Herodotus, Homer, Euripides, Aristophanes, Sophocles, Demosthenes.

The course shall include Greek Syntax and Grammar, and Greek History as prescribed for the Intermediate in Arts.

2. The Honours Course shall include, in addition to the Pass Course, selections from the following authors, to be prescribed from time to time by the Board of Studies concerned:—

Thucydides, Æschylus,

and may also include further selections from the authors mentioned in Regulation 1.

The course shall include the Philology of the Greek Language as well as the History of Classical Greek Literature.

3. The subjects and marks shall be distributed in the same way as in the case of Armenian.

LATIN.

1. The Pass Course in Latin shall consist of suitable selections from the following authors to be prescribed from time to time by the Board of Studies concerned:—

Cicero, Livy, Lucan, Virgil, Horace.

The course shall include Latin Syntax and Grammar and Roman History as prescribed for the Intermediate in Arts.

2. The Honours Course shall include, in addition to the Pass Course, selections from the following authors to be prescribed from time to time by the Board of Studies:—

Pliny, Tacitus, Terence, Lucretius, Catullus,

and may also include further selections from the authors mentioned in Regulation 1.

The course shall include the Philology of the Latin Language as well as the History of Latin Literature to the end of the Augustan Period.

3. The subjects and marks shall be distributed in the different papers in the same way as in the case of Armenian.

FRENCH AND GERMAN.

1. The course in French or German for the Pass as well as for the Honours, shall consist of such works in prose and verse as may be prescribed from time to time by the Board of Studies concerned.

2. The Pass Course shall include in addition to the prescribed texts, Grammar and the Outlines of French or German History.

3. The Honours Course shall include in addition to the subjects mentioned in Regulations 1 and 2 above, the elements of French or German Philology and the history of a selected period of French or German Literature.

4. The subjects and marks shall be distributed in the same way as in the case of Armenian.

LINGUISTICS.

This subject can be taken up only by candidates who take up one of the Languages specified in A (I) or Anthropology or History.

The Pass Course in Linguistics shall include the General Principles of Linguistic Science, Growth and Development of Languages, Phonetics, the Language-Families of the World, and the Languages of India.

The Honours Course in Linguistics shall include the topics prescribed for the Pass Course, to be studied in greater detail. In addition, it will include the Comparative and Historical Grammar of English, or of the language chosen from A(I) illustrated by selected texts. It shall further include a cognate language to be chosen out of an allied group according to a scheme to be recommended from time to time by the Board of Higher Studies in Comparative Philology. Easy texts in the cognate language shall be prescribed.

HISTORY.

1. The Pass Course in History shall be as follows:—

Paper I.—History of Europe from the Fall of Constantinople to the Treaty of Berlin.

Paper II.—History of England—a special period.

Paper III.—History of India from the earliest times to the close of the 19th century: and the elements of Ancient Hindu and of Mahomedan civilisation in India.

2. The Honours Course shall comprise in addition to the above—

Paper IV.—A special period of Greek History.

Paper V.—A special period of Roman History.

Paper VI.—The History of the Middle Ages in Europe from the rise of the Mediæval European powers down to the end of the 15th century.

In each of the special Honours papers at least one question shall be set, to be answered in the form of an essay which shall carry not less than 25 marks.

Candidates shall be expected to possess a knowledge of the Geography of the countries whose history they study, and to understand the use of physical and historical maps.

Books on History shall be recommended from time to time by the Board of Studies concerned who shall also select the special periods.

POLITICAL ECONOMY AND POLITICAL PHILOSOPHY.

1. The Pass Course in Political Economy and Political Philosophy shall be as follows:—

Paper I.—Political Economy.

Paper II.—Political Philosophy.

Paper III.—Application of the principles of Political Economy to Indian topics.

2. The Honours Course, in addition to the above, shall be as follows:—

Paper IV.—Political Economy (a higher course).

Paper V.—Political Philosophy (a higher course), including a specially selected text or texts.

Paper VI.—Essay.

3. The following are the Syllabuses for the different subjects:—

Political Economy.

Definition. Scope. Relation to Sociology. Politics. Statistics. Methods. Standpoints and Schools. Postulates. Wealth. Utility. Income.

A knowledge in outline of the fundamental propositions under each head of division named below. A fuller knowledge of the special points mentioned below under these heads:—

(*a*) *Production.*—Production on a large and on a small scale. Land. Labour. Capital. Laws of Return. Population. Organisation of Labour. Control of Business.

(*b*) *Consumption.*—Demand and supply. Balance between the two.

(c) *Distribution.*—Rent. Wages. Profits. Systems of Rent and Land Tenure. Custom.

(d) *Exchange.*—Value. Price. Money. Bimetallism. Banks. Foreign Exchange. Credit. Trade, home and foreign. International Values.

(e) *Descriptive Economics.*—Companies and Partnership, Organisation of Industries, Trades Union, Co-operation in the spheres of Production and Distribution, Co-operative Credit Societies. Banking systems. Money Market. Stock Exchange.

(f) *Economic functions of Government.*—Economic Freedom. Government Regulation of, and Government participation in, the work of production, distribution and exchange. Taxation. Public Revenue and Expenditure. National Debt. Private Property. Socialism. Poor Laws. Free Trade. Protection. Reciprocity.

Economic Progress on the work of reproduction, distribution, and exchange.

POLITICAL PHILOSOPHY.

Definition. Scope. Methods.

The State. Leading Theories of its origin and nature. Law. Government.

The People of the State. The Nation. Nationality as a constituent element of the State. Political Society. Its Divisions. Privileged Classes. Citizenship. Classes without political rights.

Rights and Duties. History of Natural Law. Practical consequences of a belief in Natural Law.

The Territory of the State. Its Political Divisions.

The Constitution of the State. Different forms of Constitutions. Monarchy, Oligarchy, Aristocracy, Democracy, City States. The outlines of the present constitutions of (a) France, (b) Germany, and (c) the United States. The present British constitution.

The Structure of the State. The Legislature. The Executive. The Judiciary. Power of Taxation. Control of the Public Purse. Test of Popular Liberty.

Growth of the State. Revolutions. Evolution. Functions of Legislation. The Individual and the State.

The End and Functions of the State. Sovereignty and Subjection. The nature and organisation of the Public Services.

APPLICATION OF THE PRINCIPLES OF POLITICAL ECONOMY TO INDIAN TOPICS.

The Geographical Factor.

Physical features and conditions of the country and their bearings on Indian economic products. Facilities of Transport.

The Special Factor.

The Village system and Rural economy. Peasant proprietorship. Caste and its economic significance. Its influence on the organisation of Indian Industries. The Joint Family, and Hindu and Mahomedan Laws of Inheritance in regard to their economic bearings and consequences. Status and custom, and their influence on rents, wages and prices. Organisaion of agriculture, handicraft and domestic industries in rural India. Caste Guilds. City Industries. Mahomedan Guilds and Industries. Indigenous organisation of Trade and Transport: of Banking and Agricultural credit.

The Political Factor.

Pax Britannica and its economic effects. Chief British Indian systems of Land-tenure with their economic consequences. Foreign capital and organisation of labour, machinery, transport and credit, and the economic development of the country. Political relations of India to England, and their effect on the Balance of Trade.

The postulates of pure Economy, how modified in their application to Indian Consumption, Production, Distribution and Exchange.

Consumption.—The Indian standard of comfort as determining Indian consumption; the laws of consumption; statistics of Indian consumption; comparison with the United Kingdom.

Production.—

(*a*) The economics of a mainly agricultural country as opposed to those of a mainly manufacturing country.
(*b*) Special conditions of land, labour and capital as affecting Indian production.
(*c*) Comparative efficiency of labour and cost of production in the chief industries in India and other countries. National wealth of India. Average production per head. Average income, gross and net.
(*d*) The development of manufacturing industries in India. Foreign capital and skill. Technical Education and its relation to castes and guilds.

Distribution.—Rent in India, as affected by (1) State Landlordism, (2) Permanent Zemindary settlements, (3) Pressure of population on the soil, (4) Land-tenure legislation and rent laws, (5) Custom.

Wages in different employments. Average rates. Purchasing power of wages.

Profits.—Profits of Manufacture. The Profits of the middleman as agricultural money-lender, and as commercial agent.

Exchange.—The Indian Balance of Trade. India's debt and the Home Charges. Currency Legislation and Foreign Exchange. The Gold Standard and its influence on prices. The Gold Reserve The Gold and Silver Currency. Purchasing power of money. Commercial Legislation.

Public Finance.—Direct and indirect taxation. Chief heads of Revenue. Nature of land revenue in India. Incidence of taxation in India. Chief heads of Expenditure.

MENTAL AND MORAL PHILOSOPHY.

I. Psychology—Pass and Honours

Scope.—Psychology as a natural science. Laws of Mind. Relation of Psychology to Physiology. Relation of Psychology to Logic, Æsthetics, Ethics and Metaphysics.

Methods.—Subjective and objective. Physiological and Comparative Psychology. Experimental Psychology.

Consciousness, the Sub-conscious, the Unconscious, Relativity of Consciousness. Analysis and classification of Mental states and processes. Correlations of the Cognitive, the Emotional and the Conative elements. Unity of conscious life.

The physical basis of Mental life.—Nerves: structure and function. Brain: structure and function. Muscle: structure and function. Physiological processes corresponding to elementary psychical states.

Mental development.—Fundamental Laws and Processes. Attention, Discrimination, Assimilation, Association and Apperception.

Sensation and its organic basis.—Stimulus and Sensation. Relativity in the sphere of sensation. Weber's Law. Fechner's Law. Sensations of Organic Life. Organs and Sensations of Taste, Smell, Touch, Hearing and Sight. Muscle. Consciousness and its Physiological basis. Sensation and movement. Qualities of Sensation.

Perception.—Perception and its object. Perception of Externality. Localisation. Perception of space. Free movement. Tactile space. Visual space. Perception, direct and indirect, of Impenetrability. Movement, Extension, Figure, Magnitude, Weight, Solidity, Distance and Direction.

Ideation.—Percept and Image. Retention, Representation and Recognition. Associaion and Suggestion, Construction, Expectation: their forms, conditions and applications. Hallucinations and Illusions. Reverie and Dream.

Consciousness of duration.—The time series, and spatial order. Apprehension of things in spatial and temporal order.

Elaboration.—Nature of thought. Judgment and its categories. Abstraction, conception and classification, reasoning language and thought and their correlated growth. Elaboration of the external world in idea. Conception of Law. Idea of interdependence.

Belief.—Its nature and grounds.

Feelings.—Feeling and organism. Expression. Pleasure, pain. Law of Self-conservation. Development of Feeling.

Classification of feelings.—The sense-feelings. Vital feelings.

Relativity in the sphere of feelings.—Relative feelings, surprise.

Emotions.—Joy and sorrow, hope and fear; anger, love and hate. Egoistic emotions, Social emotions, Sympathy, Intellectual emotions. Æsthetic emotions,—the beautiful, the sublime, the ridiculous. The Moral sentiment. The Religious sentiment.

Conation.—Primitive elements. Spontaneous and Reflex action. Emotional expression and gesture. Ideo-motor action, Imitation and Play, Instinct, Heredity, Habit and their relation to the organism. Attention.

Voluntary action.—Its nature, origin and development. Impulse, Appetite, End, Desire and Motive. Conflict of Desires. Deliberation. Volition—purpose and intention, self-control, and formation of character.

Consciousness of volition.—Consciousness of freedom. The individual self in relation to the physical and the social environment.

II. General Philosophy—Pass and Honours.

Philosophy.—Definition and province. Relation of Philosophy to Epistemology and Ontology. Relation of Philosophy to Science.

Methods.—Dogmatism, Scepticism, Criticism, and Dialectic.

Knowledge.—Philosophical knowledge as the analysis, criticism, and rationalisation of experience. Idealism, Realism and Ideal-Realism.

Origin of Knowledge.—*A priori* and *a posteriori* theories. Dogmatism and Criticism, Evolution and Dialectics.

Categories of Knowledge.—Space, Time, Substance, Causality: the contents and origin of these ideas.

Dialectics as applied to Knowledge.—Subject, object and the absolute. Phenomenon and noumenon. The Finite and the Infinite. The Conditioned and the Unconditioned. The Relative and the Absolute.

The ideas of the World, the Soul, and God.

The World.—Reality. The World as a system of reals. Temporal and Spatial order. Matter and motion, Energy, Conservation and Correlation. The Causal series. Substance and Attribute. The Individual and the Universal. Realism and Nominalism. Mechanism and Life. Organisation. The species idea. Evolution in Nature. Mechanical and Teleological Evolution.

The Soul.—Consciousness and life. The physiological and the psychical series. Parallelism, and other theories of their relation. Mental evolution in the animal kingdom. Mental evolution in the race. Nature and origin of reason. The soul and the self. The empirical self, the individual self and the social self. Society and the individual. Custom and social morality. Organisation of Rights. The Ethos. Ethicality. Personality and personal rights. The Moral Law. The Moral Reason. The Noumenal self as distinguished from the empirical self.

God.—Contents of the idea. God as conditioning the world and the soul. God as the Absolute. The idea of the Absolute, and its implications. Relation of God to the world-series, and the soul-series. Types of Monism. Dualism and Pluralism. Transcendence and Immanence. Ultimate causality and end. Relation of God to man. Moral Government and Providence. Liberty and Necessity. Future Life and Eternity. The Cosmos considered *sub specie æternitatis*. The Universal reason.

III. Ethics—Pass and Honours.

Definition, province and end of Ethics.

Relation of Ethics to Psychology, Sociology, Politics, Metaphysics and Theology.

Methods of Ethics: Leading Opinions on: Character of Ethical Science.

Actions: Moral and non-Moral: Analysis of Desire. Intention. Motive, End. Volition, Natural and Moral evil. Sin and Error.

Elements of the Moral Consciousness: Intellectual, Emotional, Volitional. Good and Evil. Right and Wrong. The Highest Good. Moral Sentiment.

Nature, Method, and Object of the Moral Judgment. Springs of action.

Postulates of Moral Judgment; Reason; Personality; Self-determination.

Conscience and Prudence. The Moral Faculty.

Moral Obligation; Nature, Grounds and source of. The seat of Authority in Morals. Moral Law. Sense of Duty. Merit and Guilt. Sanctions. Theory of Reward and Punishment.

The leading Ethical Standards and a critical estimate of them. Law—Divine, Political. Pleasure and Happiness, Egoism. Altruism. The Æsthetic Sense. Immutable Law and Eternal Fitness. Perfection and Self-realisation. Evolution, individual and social.

Relation of the Individual and Society. The Social Organism. Moral Institutions.

Duties and Virtues: Nature of; and Principles of their classification. Conflict of Duties.

Growth of the character. Moral Progress in the Race The Moral Ideal.

HONOURS.

The additional Honours subjects shall include—

(a) Natural Theology.
(b) History of Philosophy.
(c) Special Texts to be selected from year to year, and Essay.

Natural Theology.

Religion.—Nature of. Relation to Science, Art, Philosophy, Morality.

Religion, Natural and Revealed.

Theology.—Relation to (a) Science of Religion and Comparative Religion, (b) Ethics, (c) Philosophy.

The Religious Consciousness.—Its originality, its contents. (a) The cognitive element—the idea of God as First Cause, as Ultimate ground, as the Infinite and the Absolute, as the Self. (b) The emotional element,—the religious sentiment,—awe, reverence, worship. (c) The volitional element, the sense of duty

Grounds of Belief in God.—(*a*) The idea of the Perfect Being, of the Infinite, of the Absolute, of necessary Being, and the Contingency of the Cosmos, (*b*) the nature of causality and the Cosmological argument, (*c*) final cause, (*d*) conscience and Moral Law. Other grounds: consensus, intuition, criticism of experience and dialectic.

Evidence of final cause.—Adaptation, external and internal. Explanations.—Mechanism, design, immanent finality. Arguments against these; and substitutes offered. Criticism of the substitutes. Reconciliation of Mechanism and Teleologism in Immanent Finality. Resulting conception of evolution.

The Nature and Attributes of the Divine Being, with special reference to Divine Personality.

The World, its creation, and conservation. Providence and Divine Government, natural and moral.

The problem of Pain and Moral Evil.

Types of Religion, Philosophically considered.

Theistic theories.

Quasi-theistic theories.—Deism, Pantheism.

Anti-theistic theories.—Materialism, Naturalism, Phenomenalism, Agnosticism, Positivism, Pessimism; their import, origin and grounds.

History of Philosophy.

A general knowledge of the systems of Bacon, Descartes, Spinoza, Locke, Berkeley, Hume, Reid, Leibnitz and Kant.

Selected Texts.

Specially Selected Texts and Essay on subjects drawn from Pass or Honours Syllabuses or Texts.

The arrangement of papers for Pass and Honours shall be as follows:—

Pass.

First Paper	Psychology.
Second ,,	Ethics.
Third ,,	General Philosophy.

Honours.

First Paper	Psychology.
Second ,,	Ethics.
Third ,,	General Philosophy.
Fourth ,,	Natural Theology.
Fifth ,,	History of Philosophy.
Sixth ,,	Essay and Selected Texts.

ANTHROPOLOGY.

The Pass Course in Anthropology shall be distributed as follows:—

Paper I.—General outlines of Anthropology.

Paper II.—Ethnology of India with special reference to some particular Province.

Paper III.—Practical Examination (simple measurements and observations).

The Honours Course in Anthropology shall be distributed as follows:—

Paper I.—General outlines of Anthropology.

Paper II.—Ethnology of India with special reference to some particular Province.

Papers III and IV.—A general outline of the racial and cultural history of India.

Papers V and VI.—Practical Examination. (Candidates will be expected to be familiar with tribal and racial types and be able to take selected measurements of living persons.)

Suitable Books, Papers and other sources of study will be recommended from time to time by the Board of Higher Studies in Anthropology with a view to indicate the scope and extent of the knowledge expected to be possessed by the candidates.

GENERAL.

1. A candidate must obtain in order to pass in the Pass Course—

In English	... 100 *marks.*
Vernacular or paper alternative to it	... 33 *marks.*
Any subject in Group A ...	... 100 *marks.*
Any subject in Group B in the Theoretical papers	60 *marks*
and	
in the Practical papers ...	... 40 *marks.*

2. A candidate must obtain in order to pass in the Honours Course—

In English	... 180 *marks.*
Any subject in Group A ...	... 180 *marks.*

Any subject in Group B in the Theoretical papers 108 *marks*
and
in the Practical papers ... ... 72 *marks*.

3. A candidate must obtain, in order to qualify for Honours—

In English ... ... 240 *marks*.
Any subject in Group A ... ... 240 *marks*
Any subject in Group B in the Theoretical papers 160 *marks*.
and
in the Practical papers ... ... 80 *marks*.

4. If a candidate takes up the Pass Course in four subjects, he must, in order to pass the B.A. Examination, pass in each subject, and obtain 360 marks in the aggregate. If he passes and obtains 500 marks in the aggregate, he shall be declared to have passed with Distinction.

5. If a candidate takes up the Pass Course in three subjects, and the Honours Course in one subject, he must, in order to pass the B.A. Examination, pass in each subject, and obtain 468 marks in the aggregate. If he passes and also qualifies for Honours in his Honours subject he shall be declared to have obtained Second Class Honours in that subject. If he passes, qualifies for Honours in his Honours subject, and obtains 360 marks in that subject, he shall be declared to have obtained First Class Honours in such subject.

6. Any candidate who has failed in one subject only, and by not more than 5 per cent. of the full marks in that subject, and has shown merit by gaining 50 per cent. or more in the aggregate of the marks of the Examination, shall be allowed to pass. If any such candidate has taken up the Pass Course in three subjects, he shall not be declared to have passed with Distinction. But if the candidate has taken up the Pass Course in three subjects and the Honours Course in one subject, and has qualified for Honours in such subject, he shall be allowed to retain his Honours and his place in the Honours list.

7. If the Examiners are of opinion that in the case of any candidate not covered by the preceding Regulation, consideration ought to be allowed by reason of his high proficiency in a particular subject or in the aggregate, they shall report the case to the Syndicate and the Syndicate may pass such candidate, or give him Honours, as the case may be.

CHAPTER XXXIII.

MASTER OF ARTS.

1. An examination for the degree of Master of Arts shall be held annually in Calcutta and at such other places as shall, from time to time, be appointed by the Syndicate and shall commence at such time as the Syndicate shall determine, the approximate date to be notified in the Calendar.

Any candidate who has passed the B.A. or the B.Com. Examination not less than two academical years previously may be examined for the degree of M.A. in any subject mentioned in paragraph 5, provided he has prosecuted a regular course of study in that subject for two academical years in a College or Colleges affiliated to the University in respect of that subject and standard, or under one or more University Professors or Lecturers in that subject.

Any candidate who has passed the B.A. or the B.Com. Examination not less than three academical years previously may be admitted as a private student to the M.A. Examination in any of the subjects included in I-XV subject to the provisions of Section 19 of the Indian Universities Act.

In the case of any of the subjects included in I-XV in which there is for the time being no provision for a regular course of study under one or more University Professors or Lecturers, a candidate who has passed the B.A. or the B.Com. Examination not less than two academical years previously may be admitted to the M.A. Examination in that subject as a private student, subject to the provisions of Section 19 of the Indian Universities Act.

2. Every * candidate shall send in his application with a certificate in the form prescribed by the Syndicate, and a fee of Rs. 80 to the Registrar not less than three months before the Examination. If a student desires to appear in the M.A. Examination in subjects III, VI, VII, XI, or XXII, he shall give the Registrar one year's notice of the fact.

3. Any Master of Arts may, on payment of a fee of Rs. 80, be admitted to the M.A. Examination in any branch other than that in which he was previously examined, provided that if he takes any of the subjects XVI to XXIII, he has prosecuted a regular course of study in that subject for two academical years in a College or Colleges affiliated to the University in respect of

* Candidates who take up Mathematics shall send in their applications and fees to the Registrar six months before the commencement of the Examination.

that subject and standard, or under one or more University Professors or Lecturers in that subject. He shall, if his attainments come up to the standard prescribed for the degree of M.A , be granted a certificate to that effect stating the subject and class in which he has passed.

4. A candidate who fails to pass or to present himself for examination, shall not be entitled to claim a refund of the fee, but he may be admitted to any one or more subsequent M.A. Examinations on payment of a like fee of eighty rupees on each occasion.

5. A candidate may be examined in any of the following subjects:—

(I) English.
(II) Sanskrit.
(III) Pali.
(IV) Arabic.
(V) Persian.
(VI) Hebrew.
(VII) Syriac.
(VIII) Greek.
(IX) Latin.
(IX-A) French.
(IX-B) German.
(X) Indian Vernaculars.
(XI) Comparative Philology.
(XII) Mental and Moral Philosophy.
(XIII) History.
(XIV) Political Economy and Political Philosophy.
(XIV-A) Commerce.
(XV) Mathematics.
(XVI) Physics.
(XVII) Chemistry.
(XVIII) Physiology.
(XIX) Botany.
(XX) Geology.
(XXI) Zoology and Comparative Anatomy.
(XXII) Experimental Psychology.
(XXIII) Anthropology.

6. There shall be a Practical Examination in subjects XVI to XXII, and candidates shall be required to pass in the practical portion of these subjects as well as in the theoretical portion defined in the Syllabuses.

In each of the subjects I to XV there shall be eight papers of four hours each, each carrying 100 marks.

In each of the subjects XVI to XXII there shall be four theoretical papers of four hours each and the practical examination shall extend over at least four days. The total marks shall be equally divided between the theoretical and practical portions of the Examination.

7. Candidates who have taken the Degree of B.A. with Honours in any of the subjects XV-XXII may be allowed to substitute a piece of research work for part of the M.A. Examination in that subject under the conditions laid down in the Regulations for the M.Sc. Degree.

In all these subjects the Syllabuses shall be the same as those prescribed for the M.Sc. Examination.

8. The limits of the subjects shall be as follows:—

ENGLISH.

1. The M.A. course in English shall be divided into two groups.

2. The first four papers of each group shall be identical, and shall cover the following subjects:—

Paper I.—General History of English Literature.
Paper II.—The Drama.
Paper III.—Poetry.
Paper IV.—Prose.

3. The course for the above papers shall include standard works in Prose, Poetry and the Drama, which shall be specified from time to time, and shall range from Chaucer down to the end of the 19th century, due regard being had to the relative importance of the different periods.

4. The remaining papers shall be taken from one of the following groups, but not from both:—

GROUP A.

Paper V.—Chaucer, and the outlines of Historical English Grammar.
Paper VI.—Shakespeare and the Elizabethan Drama, or a selected period of Poetry.
Paper VII.—A selected period of Prose.
Paper VIII.—An Essay or Essays on subjects connected with the course.

The special periods in Papers VI and VII shall be specified from time to time; no period shall be selected before Chaucer and not more than one shall be pre-Elizabethan.

GROUP B.

Paper V.—English language and literature prior to 1100.
Paper VI.—English language and literature from 1100 to 1500, including Chaucer.
Paper VII.—Historical English Grammar: including the elements of Teutonic Philology.
Paper VIII.—An Essay or Essays on subjects connected with the course.

5. In every paper where texts are prescribed, unseen passages shall be set from contemporary works, carrying 40 marks.

6. Questions on the text shall include—

(*a*) Questions on the subject-matter, and
(*b*) Questions on the language of the text.

A candidate who has taken his B.A. Degree with Honours in English may, subject to the conditions specified below, offer a thesis connected with some department of the subject in lieu of examination in two Papers. If the candidate has taken up Group A, the thesis will be allowed to be substituted for either Paper VI or VII, and Paper VIII. If the candidate has taken up Group B, the thesis will be allowed to be substituted for either Paper II, III or IV and Paper VIII.

The conditions to be fulfilled by a candidate who is allowed to offer a thesis are as follows:—

(*a*) He must have completed one year's study of the M.A. course in English under University Lecturers or in a College affiliated in English up to the M.A. standard.

(*b*) He must, at the end of the year, submit to the Board of Higher Studies in English an application for permission to offer a thesis in lieu of part of the Examination.

(*c*) The application shall indicate the subject and scope of the thesis he wishes to offer and must be recommended by the Professor or Professors under whom he has been working.

(*d*) If the application be granted by the Board of Higher Studies in English, the thesis must be prepared under the general direction of the Professor or Professors with whom the candidate is prosecuting his studies.

(*e*) The candidate shall deliver three copies of the thesis (printed or typewritten) to the Secretary to the Council of Post-Graduate Teaching in Arts at least one month before the first day of the M.A. Examination at which he intends to present himself.

(*f*) The thesis shall be examined by a Board of three Examiners and the maximum number of marks assigned to the thesis

shall be 200. The Examiners may, in their discretion, subject the candidate to a *viva voce* examination on the subject of the thesis.

(*g*) The name of a candidate whose thesis has been approved shall be marked with an asterisk in the list of successful candidates published in the Gazette and also in the University Calendar.

SANSKRIT.

The course shall include the following:—

Paper I.—(*a*) One selected Ashtaka of the Rigveda, with Sayana's Commentary thereon.

(*b*) Sayana's Introduction to his Commentary on the Rigveda ... ... 100 *marks*.

Paper II—Siddhanta-Kaumudi (whole) 100 *marks*.

Paper III—(*a*) The general principles and methods of Comparative Philology, including the elements of Phonetics.

(*b*) The history of the Indo-European family of languages, with special reference to Sanskrit (Vedic and Classical), and Prakrit.

(*c*) Sabda-saktiprakasika, and its bearing on the science of language ... ... 100 *marks*.

Paper IV.—Two Essays, (*a*) dealing with some subject connected with the history of Sanskrit literature generally: (*b*) dealing with some subject connected with the history of the special department covered by the group taken up ... ... 100 *marks*.

Papers V, VI VII and VIII.—One of the following groups to be selected by the candidate:—

A. (Literature.)

Paper V.—(*a*) Poetry texts: selected portions of Naishadha Charita, Kamandaki Nitisara, Sukranitisara, Mahabharata (Santiparva, Rajadharma), and of either Kiratarjuniya or Sisupalbadha 75 *marks*

(*b*) Translation from English into Sanskrit . 25 *marks*

Paper VI.—(*a*) Drama texts: Five of the following dramas, together with as much of Vararuchi's Prakrit Prakasa as is necessary for the appreciation of the Prakrit passages:—

Vikramorvasi, Malavikagnimitra, Malati Madhava, Mahavicharita, Mrichchhakatika, Karpuramanjari, Venisanhara, Prabodh Chandrodaya, Balaramayana. 75 *marks*.

(*b*) Translation from English into Sanskrit ... 25 *marks.*

Paper VII.—(*a*) Prose texts: Selected portions of two of the following, namely, Kadambari, Harshacharita, Vasavadatta and Dasakumaracharita ... 75 *marks.*

(*b*) Unseen passages in Sanskrit Prose for translation into English ... ... 25 *marks.*

Paper VIII.—(*a*) Rhetoric and Prosody, namely, Kavyaprakas, Ekavali, Sarasvati Kanthabharana, Sahityadarpana and either Pingala's Chhanda Sutras with Halayudha's Vritti or Chhandamanjari ... 75 *marks.*

(*b*) Unseen passages in Sanskrit Poetry for translation into English ... ... 25 *marks.*

B. (*Vedas.*)

Paper V.—(*a*) Yaska's Nirukta and Pingala's Chhanda Sutras with Halayudha's Vritti ... ... 75 *marks.*

(*b*) Pratisakhya of the Rig-Veda, with the commentary of Uvata ... ... 25 *marks.*

Paper VI.—(*a*) Aitareya Brahmana with Sayana's Commentary 75 *marks.*

(*b*) Simple unseen passages in Vedic Sanskrit for translation into Classical Sanskrit. (The interpretations of any recognised Indian School will be accepted.) 25 *marks.*

Paper VII.—(*a*) Selected portions of the Chhandogya and Brihadaranyaka Upanishads, with Sankara's Commentary ... ... 75 *marks.*

(*b*) Simple unseen Sanskrit passages from any Upanishad for translation into English ... ... 25 *marks.*

Paper VIII.—(*a*) Grihya Sutra—either Asvalayana or Gobhila—with commentary ... ... 75 *marks.*

(*b*) Translation from English into Sanskrit ... 25 *marks.*

C. (*Mimansa and Smriti.*)

Paper V.—(*a*) Selected portions of Mimansa Sutras with Sabara Bhashya ... ... 75 *marks.*

(*b*) Simple unseen Sanskrit passages from any treatise or commentary on the Mimansa Philosophy, such as the Sloka-Vartika and the Tantra-Vartika, for translation into English ... ... 25 *marks.*

Paper VI.—(*a*) Jaiminiya Nyaya Mala Vistara and Mimansa-Nyaya-Prakasa ... ... 75 *marks.*

(*b*) Simple unseen Sanskrit passages from any treatise or commentary on the Mimansa Philosophy, such as the Mimansa-Balaprakasa, and the Tupteeka, for translation into English ... ... 25 *marks.*

Paper VII.—(*a*) Manu Samhita with Kulluka's Commentary: Dharma Sutras of Apastamba and Gautama with Haradatta's commentary ... ... 75 *marks.*

(*b*) Grihya Sutra—either Asvalayana or Gobhila 25 *marks.*

Paper VIII.—(*a*) Yajnavalkya Samhita with Vijnanesvara's Mitakshara.

Parasara's Institute with Madhava's Commentary 75 *marks.*

(*b*) Translation from English into Sanskrit ... 25 *marks.*

D. (*Vedanta.*)

Paper V.—(*a*) Vedantasara (Jacob's Edition), Panchadasi Vedanta Paribhasha, Hastamalaka (with Commentary), and Siddhantalesa ... ... 75 *marks.*

(*b*) Simple unseen Sanskrit passages from any work on Vedanta Philosophy, such as the Vivarana-prameya Samgraha, for translation into English ... 25 *marks.*

Paper VI.—(*a*) Vedanta Sutras with Sankara Bhashya 75 *marks.*

(*b*) Translation from English into Sanskrit ... 25 *marks.*

Paper VII.—(*a*) Selected portions of Sribhashya ... 75 *marks.*

(*b*) Advaita-Brahma-Siddhi ... ... 25 *marks.*

Paper VIII.—(*a*) Bhagavadgita and selected portions of the Upanishads, with Sankara Bhashya ... 75 *marks.*

(*b*) Passages for translation into English from the Anubhashya and the Saivabhashya ... 25 *marks.*

E. (*Sankhya and Yoga.*)

Paper V.—(*a*) Sankhya Sutra of Kapila, with Vritti of Aniruddha.

Sankhya-Karika of Iswarakrishna, with Bhashya of Gaudapada ... ... 75 *marks.*

(*b*) Simple unseen Sanskrit passages from any treatise or commentary on the Sankhya Philosophy, for translation into English ... ... 25 *marks.*

Paper VI.—(*a*) Sankhya Pravachana Bhashya, Sankhya-Sara and Sankhya-Tattva-Kaumudi ... 75 *marks.*

(*b*) Translation from English into Sanskrit ... 25 *marks.*

Paper VII.—(*a*) Yoga Sutras of Patanjali, with Bhashya of Vyasa and Vritti of Bhoja. Yoga-Vartika of Vijnana-Bhikshu ... ... 75 *marks.*

(*b*) Simple unseen Sanskrit passages from any treatise or commentary on the Yoga Philosophy, for translation into English ... ... 25 *marks.*

Paper VIII.—(*a*) Selected portions of the Yoga-Vasishtha-Sarvadarsan Samgraha ... ... 75 *marks.*

(*b*) Translation from English into Sanskrit ... 25 *marks.*

F. (*Nyaya and Vaiseshika.*)

Paper V.—(*a*) Nyaya Sutras of Gautama, with the Bhashya of Vatsyayana, Vartika of Udyotkara, and Vritti of Visvanatha ... ... 75 *marks.*

(*b*) Simple unseen Sanskrit passages from any treatise or commentary on the Nyaya Philosophy, for translation into English ... ... 25 *marks.*

Paper VI.—(*a*) Nyayamanjari of Jayanta Bhatta:

Selected portions of Khandana Khanda Khadya of Sriharsha ... ... 75 *marks.*

(*b*) Translation from English into Sanskrit ... 25 *marks.*

Paper VII.—(*a*) Bhasha Parichchheda, Siddhanta-muktavali, Kusumanjali of Udayanacharyya with Commentary of Ruchidatta and gloss of Vardhamana 75 *marks.*

(*b*) Translation from English into Sanskrit ... 25 *marks.*

Paper VIII.—(*a*) Vaiseshika Sutras of Kanada, with Bhashya of Prasastapada, Nyayakandali of Sridhara, and Vivriti of Jayanarayana.

Saptapadarthi of Sivaditya with Commentary of Yatindramadhava ... ... 75 *marks.*

(*b*) Simple unseen Sanskrit passages from any treatise or commentary on the Vaiseshika Philosophy, for translation into English ... ... 25 *marks.*

G. (*General Philosophy.*)

Paper V.—(*a*) Sankhya Sutras of Kapila with Vritti of Aniruddha. Either Sankhya-Tattva-Kaumudi or Sankhya Karika. Yoga Sutras of Patanjali, with the Bhashya of Vyasa and Vritti of Bhoja ... ... 75 *marks.*

(*b*) Simple unseen Sanskrit passages from any work on Philosophy for translation into English 25 *marks.*

Paper VI.—(*a*) Nyaya Sutras of Gautama with Vashya of Vatsyayana and Vritti of Visvanatha. Vaiseshikasutras of

Kanada, with Vashya of Prasastapada, and Nyayakandali of Sridhara ... ... 75 *marks.*
(*b*) Translation from English into Sanskrit ... 25 *marks.*

Paper VII.—(*a*) Vedantasara (Jacob's Edition), Bhagavadgita and selected portions of Vedanta Sutras, with Sankara Bhashya ... ... 75 *marks.*
(*b*) Translation from English into Sanskrit ... 25 *marks.*

Paper VIII.—(*a*) Nyayaratnamala of Parthasarathi Misra; Mimansa Nyaya Prakasa of Apadeva. Selected portions of the Upanishads, with Sankara Bhashya 75 *marks.*
(*b*) Simple unseen Sanskrit passages from any work on Philosophy for translation into English 25 *marks.*

H. (*Prakrit.*)

Paper V.—(*a*) Two selected Jaina canonical texts ... 75 *marks.*
(*b*) Translation from English into Sanskrit (or Prakrit, at the option of the candidate) ... ... 25 *marks.*

Paper VI.—(*a*) Prakrit portions of the following dramas:—
Sakuntala, Vikramorvasi, Malavikagnimitra, Uttaracharita, Malatimadhava, Mahaviracharita, Mrichchhakatika, Mudrarakshasa, Ratnavali, Karpuramanjari, Venisaṁhara ... ... 75 *marks.*
(*b*) Translation from Sanskrit into Prakrit ... 25 *marks.*

Paper VII.—(*a*) Setubandha; Gaudavaho; Kumarapalacharita, together with a general knowledge of Prakrita Paingalam ... ... 75 *marks.*
(*b*) Simple unseen passages in Prakrit for translation into English ... ... 25 *marks.*

Paper VIII.—(*a*) Prakrit Grammar, as in Vararuchi's Prakrita Prakas (Cowell), Chhandah's Prakrita Lakshanam (Hoernle), Hemchandra (Pischel).
Candidates are also expected to be familiar with the substances of Hoernle's Grammar of the Gaudian languages ... ... 75 *marks.*
(*b*) Simple unseen passages in Prakrit for translation into Sanskrit ... ... 25 *marks.*

I. (*Epigraphy and History.*)

Paper V.—(*a*) Rájatarangini and its continuations with Stein's Introduction and Commentary ... 70 *marks.*
(*b*) Unseen passages in Sanskrit for translation into English ... ... 30 *marks.*

Paper VI—(*a*) Inscriptions of Asoka ... ... 80 *marks.*
(*b*) Early Indian Alphabets ... ... 20 *marks.*

Paper VII.—Selected Inscriptions from Epigraphia Indica. Fleet's Corpus Inscriptionum, and Prachina Lekhamala ... ... 100 *marks.*

Paper VIII.—(*a*) Ancient Geography of India ... 50 *marks.*
(*b*) Translation from English into Sanskrit ... 50 *marks.*

Questions on prescribed texts (except on Grammar) in the compulsory papers as also in every group shall include—

(*i*) Passages for translation into English (this shall not carry more than 25 marks in any one paper).
(*ii*) Questions on the subject-matter and on the language of the set books.
(*iii*) Questions on Grammar arising from the texts.
(*iv*) Passages for translation into English or discussion in simple Sanskrit, taken from standard Sanskrit Commentaries on the texts.

In Groups C, D, E, F, and G, the questions on the prescribed texts shall also include alternative questions on philosophical topics for discussion in English (or in simple Sanskrit at the option of the candidate); in answering such questions, candidates will be expected to be able to state the views of the School taken up and controvert the views of the other Schools.

The first paper shall include questions on the History of Vedic Literature, and the History of Philosophy and Religion during the Vedic Period; such questions shall carry 25 marks.

The second paper, and in Group H, the eighth paper, shall include questions on the practical application of the rules of Grammar.

The eighth paper in Group A shall include questions framed with a view to test the ability of candidates to apply the rules of rhetoric to passages from the prescribed texts.

Passages set for translation from English into Sanskrit shall be translated into Classical (and not Vedic) Sanskrit.

The Syndicate shall, upon the recommendation of the Board of Studies concerned, select the texts in accordance with the syllabus, and may also recommend books or specify editions to indicate more fully the extent and standard of knowledge required in any paper.

PALI.

1. The M.A. course in Pali shall be divided into four groups.

2. The first four papers of all the groups shall be identical and shall cover the following subjects:—

Paper I—Selected portions of the Sutta-pitaka.
Paper II.—Selected portions of the Vinaya-pitaka.
Paper III.—Pali and Prakrit Grammar and Philology.
Paper IV.—History of Pali Literature and Buddhism.

3. The remaining papers shall be taken from one of the following groups:—

GROUP A—(LITERARY).

Paper V.—Selected portions of the Jatakas.
Paper VI.—Selected portions of Pali Literature in general.
Paper VII.—Inscriptions.
Paper VIII.—Essay and Translation of unseen Pali passages into English.

GROUP B—(PALI PHILOSOPHY).

Paper V.—Selected portions of the Abhidhamma-pitaka.
Paper VI.—Selected portions of the non-canonical works.
Paper VII.—Selected portions of the canonical and non-canonical works with commentaries.
Paper VIII.—Essay and Translation.

GROUP C—(EPIGRAPHY AND HISTORY).

Paper V.—(*a*) Selected portions of the Pali annals and chronicles.
(*b*) Unseen passages for translation into English.

Paper VI.—Inscriptions of the Maurya period.

Paper VII.—Cave-inscriptions and inscriptions of the Gupta period.

Paper VIII.—Ancient Geography of India and Essay.

GROUP D—(MAHAYANA LITERATURE AND PHILOSOPHY).

Paper V.—Selected texts (prose and poetry) of Mahayana Literature.

Paper VI.—Selected texts of Madhyamika and Yogachara Philosophy.

Paper VII.—Selected texts of Buddhist works on Nyaya.

Paper VIII.—(*a*) Grammar.
(*b*) Essay.

HEBREW.

The course shall include—

Paper I.—Passages from one of the books of the Hexateuch for translation, criticism and exegesis ... 75 *marks.*
English passage(s) for translation into Hebrew 25 *marks.*

Paper II.—Passages from one or more of the Prophetical Books for translation, criticism and exegesis ... 75 *marks.*
English passage(s) for translation into Hebrew 25 *marks.*

Paper III.—Passages from the Old Testament Poetical Books for translation, criticism and exegesis ... 100 *marks.*

Paper IV.—Unseen passages from the Old Testament 100 *marks.*

Paper V.—Either (A) Passages for translation into English from prescribed Post-Biblical books with questions arising out of the subject-matter of the texts ... 100 *marks.*
Or (B) Passages for translation into English from specified books in Syriac, including always a portion of the Peshitta version of the New Testament, together with questions on the language and subject-matter of the passage set.

Paper VI.—History of Jewish Religion and Civilisation from the earliest times to the destruction of Jerusalem (A.D. 70) ... ... 100 *marks.*

Paper VII.—History and contents of Hebrew Literature, Biblical and Post-Biblical ... ... 100 *marks.*

Paper VIII.—Essay on a subject connected with the course 100 *marks.*

Papers I, II and III shall include questions on Grammar and Philology.

ARABIC.

1. The course in Arabic shall include the following works or portions thereof:—

Literature.

Kitáb-ul-Aghání.

Yatímat-ut-Dahr.

Tafsír.

Qor'án with the Commentary of Zamakhsari.

Hadis.

Mishkát-ul-Masábíh.

Philosophy.

Isáhrát of Avicenna.

History.

Majma-ul-Buldán of Bilázurí.

Grammar.

Zamakhsharí's Mufassal.

Rhetoric.

Pará'id of Mahmúd Jawnpúrí.

2. The course shall also include Arabic Prosody, the outlines of Mahomedan history and a general knowledge of the history of Arabic literature.

The Board of Studies concerned may make such modifications in the list of books as may seem to them desirable.

The scope of the subject of each paper shall from time to time be defined by the Board concerned and the distribution of marks may be modified in such manner as may seem desirable by the Board.

3. The subjects and the marks shall be distributed as follows:—

Paper I.—(*a*) Questions on the Kitáb-ul-Agháni ... 75 *marks.*
(*b*) English passages for translation into Arabic 25 *marks*

Paper II.—(*a*) Questions on Yatimat-ut-Dahr ... 75 *marks.*
(*b*) English passages for translation into Arabic 25 *marks.*

Paper III.—(*a*) Unseen passages of Arabic Prose for translation into English ... ... 60 *marks.*
(*b*) Questions on the History of Arabic literature 40 *marks.*

Paper IV.—(*a*) Questions on the Mufassal ... 50 *marks.*
(*b*) Questions on the Pará'id ... ... 50 *marks.*

Paper V.—(*a*) Questions on the prescribed portion of the Qor'án with the Commentary ... 50 *marks.*
(*b*) Questions on the Mishkát-ul-Masábih ... 50 *marks.*

Paper VI.—(*a*) Questions on the Ishárát ... 50 *marks.*
(*b*) Questions on the Majma-ul-Buldán ... 50 *marks.*

Paper VII.—Questions on Mahomedan History.
(*a*) General ... ... 70 *marks.*
(*b*) India ... ... 30 *marks*

Paper VIII.—Essay on some subject connected with the course ... ... 100 *marks.*

Questions on the prescribed texts shall include—

(*i*) Passages for translation into English, not carrying more than 25 marks in any one paper.

(*ii*) Questions on the subject-matter and the language of the passages set.

PERSIAN.

1 The course in Persian shall include the following works or portions thereof:—

Poetry.—The Hadíqa of Sanáí.
The Mantiq-ul-Tair of 'Attár.
The Díán of Nàsir-i-Khusraw.
The Qasá'id of Zahír Fárayábi.

Prose.—Tazkira of Dawlat Shah.
The Tazkira of 'Awfí.
The Kímíyà-i-Sasádat of Ghazzáli.
The Durra-i-Nádira.
The Hadá'iq-ul-Balàghat.

Arabic Prose.—The prose selections prescribed for the B.A. Pass Course.

2. The course shall also include the outlines of Mahomedan history and the history of the Persian language and literature.

The Board of Studies concerned may make such modifications in the list of books as may seem to them desirable.

The scope of the subject of each paper shall from time to time be defined by the Board concerned and the distribution of marks may be modified in such manner as may seem desirable by the Board.

3. The subjects and the marks shall be distributed as follows:—

Pape· I.—Questions on the Hadíqa of Saná'í and the Mantiq-ut-Tair of ' Attár. ... 100 *marks.*

Papeı II.—Questions on the remaining prescribed poetry texts ... 100 *marks.*

Paper III.—(*a*) Questions on the Tazkiras of Dawlat Shah and of 'Awfí ... 50 *marks.*
(*b*) Questions on the remaining Persian Prose texts ... ... 50 *marks.*

Paper IV.—Questions on Arabic Prose texts ... 100 *marks.*
Paper V.—(*a*) Unseen Persian passages for translation into English ... ... 50 *marks.*
(*b*) Questions on the Philology of the Persian language ... ... 50 *marks.*

Paper VI.—(*a*) Translation from English into Persian ... ... 70 *marks.*
(*b*) Questions on the Rhetoric and Prosody ... 30 *marks.*

Paper VII.—(*a*) Questions on the history of Persian literature ... ... 50 *marks.*
(*b*) Questions on Mahomedan history ... 50 *marks.*

Paper VIII.—Essay on a subject connected with the course. ... ... 100 *marks.*

Questions on the prescribed texts shall include—

(*i*) Passages for translation into English, not carrying more than 25 marks in any one paper.
(*ii*) Questions on the subject-matter and language of the passages set.

SYRIAC.

1. The course in Syriac shall comprise—

Paper I.—The General History of Syriac literature 100 *marks.*
Paper II.—Prescribed Poetical texts ... ... 100 *marks.*
Paper III.—Prescribed texts dealing with Martyrology ... ... 100 *marks.*
Paper IV.—Prescribed Biblical texts ... ... 100 *marks.*
Paper V.—Texts specially prescribed for their Philological matter ... ... 100 *marks*
Paper VI.—Prescribed Historical texts ... 100 *marks.*
Paper VII.—Prescribed Ritualistic texts ... 100 *marks.*
Paper VIII.—Syntax and Essay ... ... 100 *marks.*

2. The course shall include prescribed texts in Prose and Poetry and the outlines of Syriac literature and language and Comparative Semitic Philology.

The Syndicate, on the recommendation of the Board of Higher Studies concerned, shall from time to time prescribe such text-books as may seem to them desirable, and define the scope of the subject of each paper. The Syndicate may also, on the recommendation of the Board of Higher Studies, modify the distribution of marks in such manner as may seem desirable

3. Questions on the prescribed texts shall include—

(*i*) Passages for translation into English, not carrying more than 25 marks in any one paper.
(*ii*) Questions on the subject-matter and the language of the passages set.

GREEK.

The course shall include—

Paper I.—(*a*) Passages from prescribed prose texts 70 *marks.*
(*b*) Unseen passages of Greek Prose for translation into English ... ... 30 *marks*

Paper II.—(*a*) Passages from prescribed Poetry texts 70 *marks.*
(*b*) Unseen passages of Greek poetry for translation into English ... ... 30 *marks.*

Paper III.—(*a*) Passages from prescribed Greek Plays ... ... 70 *marks*
(*b*) Unseen passages from the Greek Dramatists for translation into English ... 30 *marks.*

Paper IV.—Passages in English for translation into Greek prose ... ... 100 *marks*

Paper V.—The Philology of the Greek tongue and the elements of Comparative Philology 100 *marks.*

Paper VI.—The General History and Antiquities of Greece ... ... 100 *marks.*

Paper VII.—History of Greek Literature ... 100 *marks.*

Paper VIII.—Essay on some subject connected with the course ... ... 100 *marks.*

In Papers I, II and III the questions on prescribed texts shall include—

(*i*) Passages for translation into English, which shall not carry more than 25 marks in any one paper.
(*ii*) Questions on the subject-matter and language of the texts.

LATIN.

The course shall include—

Paper I.—Passages from prescribed Poetry texts.

Paper II.—Passages from prescribed Prose texts.

Paper III.—Unseen passages from Latin authors for translation into English.

Paper IV.—Passages in English for translation into Latin prose.

Paper V.—The Philology of the Latin tongue and the elements of Comparative Philology.

Paper VI.—The general History and Antiquities of Rome.

Paper VII—History of Classical Latin Literature.

Paper VIII.—Essay on some subjects connected with the course

In Papers I and II the questions on the prescribed texts shall include—

(*i*) Passages for translation into English, which shall not carry more than 25 marks in any one paper.
(*ii*) Questions on the subject-matter and language of the texts.

FRENCH.

The course shall include—

Paper I.

Literary History of France from the earliest times to the beginning of the Great War. This would also include the political and the cultural history of the country so far as it is reflected in the literature.

Paper II.

Literature of the Seventeenth Century (the Classical Age).

Paper III.

Modern Literature, 1850-1913.

Paper IV.

Translation from English into French (50 marks).

Essay on some subject connected with French literature or culture (50 marks).

A minimum of 25 marks must be obtained by the candidate in the translation section of this paper in order to pass the examination at all. In the essay section the candidate should get the choice of one out of three subjects.

Group A (Literary).

Paper V.

Literature of the Sixteenth Century.

Paper VI.

Literature of the Eighteenth Century up to the beginning of the French Revolution.

Paper VII.

Literature from the beginning of the French Revolution up to 1850.

Paper VIII.

Outlines of the Historical Grammar of the French Language and Modern French Grammar.

GROUP B (LINGUISTIC).

Paper V.

General History of the Growth and Development of the French Language from Latin.

Paper VI.

History of the French Language up to the Thirteenth Century studied in texts.

Paper VII.

History of the French Language during the Fourteenth and Fifteenth Centuries studied in texts.

Paper VIII.

History of the French Language from the Sixteenth Century onwards studied in texts.

GERMAN.

The course shall include—

Paper I.

Literary History of Germany from the earliest times to the beginning of the Great War. This would also include the political and cultural history of the country as far as it is reflected in the Literature.

Paper II.

Literature from 1760 to 1800.

Paper III.

Literature from 1870 to 1913.

Paper IV.

Translation from English into German (50 marks).

Essay on some subject connected with German literature or culture (50 marks).

A minimum of 25 marks must be obtained by the candidate in the translation section of this paper in order to pass the ex-

amination at all. In the essay section the candidate should get the choice of one out of three subjects.

GROUP A (LITERARY).

Paper V.

Literature of the Sixteenth and Seventeenth Centuries.

Paper VI.

Literature from 1700 to 1760.

Paper VII.

Literature from 1810 to 1870.

Paper VIII.

Outlines of the Historical Grammar of the German Language and Modern German Grammar.

GROUP B (LINGUISTIC)

Paper V.

General History of the Growth and Development of the German Language from the earliest times

Paper VI.

Gothic and Old English.

Paper VII.

Old High German.

Paper VIII.

Middle High German and Early New High German (up to 1700)

INDIAN VERNACULARS.

Candidates will be examined in—

(A) An Indian Vernacular as principal subject, to be selected by the candidate from a list prescribed from time to time by the Board of Higher Studies in Indian Vernaculars.

(B) A second Indian Vernacular as subsidiary subject, to be selected by the candidate from a list prescribed from time to time by the Board of Higher Studies in Indian Vernaculars.

(C) Elements of two of the following languages, to be selected by the candidates with special reference to their influence on the Vernaculars chosen as principal and subsidiary subjects:

Prakrit, Pali, Persian, Pashtu.

This list may be varied from time to time by the Board of Higher Studies in Indian Vernaculars.

(D) Elements of Indo-Aryan or such other branch of Philology as may be prescribed from time to time by the Board of Higher Studies in Indian Vernaculars.

Four papers shall be set on (A), two on (B), one on (C) and one on (D).

The four papers on (A) shall be distributed as follows:—

Paper I.—History of the Literature of the Principal Language taken up.

Candidates will be expected to possess a general knowledge on the entire subject as also a special knowledge of a prescribed period or movement in literature.

Paper II.—Old Texts and Unseens.

Paper III.—Mediæval and Modern Texts and Unseens.

Paper IV.—(*a*) A prescribed period of literary or linguistic history and (*b*) a selected movement, literary, scientific, social or religious.

Candidates will be required in this paper to give their answers in the form of two essays, one of which at least must be composed in the Vernacular taken up as principal subject.

The two papers on (B) shall be distributed as follows:—

Paper V.—Easy prescribed Texts and Unseens.

Paper VI.—Elements of Grammar, Philology and Literary History.

The paper on (C) shall include questions on easy prescribed texts and simple questions on Grammar.

The paper on (D) shall be devoted to Indo-Aryan or other prescribed branch of Philology, in so far as it elucidates the origin and development of Indian Vernaculars.

Each of the eight papers shall carry 100 marks.

The scope of the subject included in each paper shall be defined and suitable books recommended from time to time by the Board of Higher Studies in Indian Vernaculars.

A candidate who has taken his B.A. degree with Honours in a language, or has taken his M.A. degree in a language or Comparative Philology may, subject to the conditions specified below, offer a thesis, in lieu of an examination in Papers III and IV.

The conditions to be fulfilled by a candidate who is allowed to offer a thesis are as follows:—

(*a*) He must have completed one year's study of the M.A. course in Indian Vernaculars under University teachers.

(*b*) He must, at the end of the year, submit to the Board of Higher Studies in Indian Vernaculars an application for permission to offer a thesis in lieu of part of the examination.

(*c*) The application shall indicate the subject and scope of the thesis he wishes to offer and must be recommended by the Professor or Professors under whom he has been working.

(*d*) If the application be granted by the Board of Higher Studies in Indian Vernaculars, the thesis must be prepared under the general direction of the Professor or Professors with whom the candidate is prosecuting his studies.

(*e*) The candidate shall deliver three copies of the thesis (printed or type-written) to the Secretary to the Council of Post-Graduate Teaching in Arts at least one month before the first day of the M.A. Examination at which he intends to present himself.

(*f*) The thesis shall be examined by a Board of three Examiners and the maximum number of marks assigned to the thesis shall be 200. The Examiners may, in their discretion, subject the candidate to a *viva voce* examination on the subject of the thesis.

(*g*) The name of a candidate whose thesis has been approved shall be marked with an asterisk in the list of successful candidates published in the Gazette and also in the University Calendar.

COMPARATIVE PHILOLOGY.

Eight Papers shall be set as follows:—

Paper I.

General Principles of Philology and the Science of Language. Psychology of Speech. The History of the Science of Grammar and of Language in India and in the Western lands. The various linguistic areas of the world. The Indo-European family of Languages and its distinguishing features. The I.E. Languages

compared and contrasted with the Isolating, the Agglutinative and the Semitic type of Languages. The various sub-families of the I E with their important sub-divisions and their distinguishing characterstics. The Aryan or Indo-Iranian branch and its important sub-divisions. The distinguishing features of the Aryan branch. The chief linguistic differences between Indian and Iranian Languages. The Indo-Aryan branch contrasted with the other Non-Aryan stocks of India (Dravidian, Kol or Munda and Mon-Khmer and Tibeto-Chinese), Semantics.

Paper II.

Principles of Phonetics. The structure of vocal organs. The production and classification of sound. The representation of sounds by phonetic alphabets. The chief systems of phonetic alphabets. The causes of sound change. "Dialectic Growth." "Phonetic Decay." The sounds of I.E. Urprache. The Phonology of Sanskrit and Avesta compared. The history of Sanskrit sounds and of Avesta sounds. Accent, and the sound changes resulting from shifting accent. Ablaut, The Development of writing and of Alphabets. Elements of Palæography, specially Indian. The Vernacular Alphabets, their origin and development.

Paper III.

The Principles of Morphology and Word-building. Development and differentiation of the Parts of Speech. The significance of Ablaut in the linguistic development. The Morphology of Sanskrit as compared to Avesta and other I.E. Languages, Nouns, Gender, Number, Case, Pronouns, Adjectives—Degrees of Comparison; Numerals; Verbs,—Systems of Tenses and Moods; Indeclinables, the *Krit* and *Taddhita* affixes in Sanskrit. The comparative Morphology of Vedic and Classical Sanskrit.

Paper IV.

Growth of Dialects. The condition of Dialectic Growth and Differentiation. History of linguistic development in India, (*i*) from Vedic to Classical Sanskrit, (*ii*) Prakrit and Pali. History of Prakrit dialects. Distinguishing characteristics of the various Prakrits. Elements of the Comparative Phonology and Morphology of Prakrit and Pali.

N.B.—Candidates are expected to be acquainted with the main outlines of the Literary History of the Languages concerned.

Paper V.

Linguistic History of India from the Prakrits to the Neo-Indian Dialects. Elements of the Linguistic History, Phonology and Morphology of the following Modern Aryan Dialects of India—Bengali, Bihari, Oriya, Hindi (Eastern and Western), Marathi, Panjabi, Sindhi and Gujrati (including Rajasthani). The candidate should be acquainted with the broad outlines of the Literary History of these Dialects; and he should possess a detailed knowledge of the Linguistic History of his mother-tongue.

Paper VI.

Comparative Syntax of Vedic and Classical Sanskrit, and of the Prakrit and Neo-Indian Dialects. The mother-tongue of the candidates should be studied in detail.

Paper VII.

Either

Urgeschichte, with special reference to Indo-Iranian Antiquities. Comparative Mythology.

Elements of Avesta and Iranian Philology. Phonology, Morphology and Syntax of Avesta as compared to Sanskrit. Candidates are expected to be acquainted with the Avesta Alphabet and to translate from the Texts prescribed into either English or Sanskrit.

Or

Elements of Dravidian, Kol or Munda and Tibeto-Chinese Linguistics. Elementary Grammar of Primitive Dravidian or Tamil. Pre-Aryan origins Non-Aryan influences on Indo-Aryan Speech.

Paper VIII.

Essay—

Candidates will be given a choice from at least *four* subjects

A candidate who has taken his B.A. degree with Honours in a language, or has taken his M.A. degree in a language, may, subject to the conditions specified below, offer a thesis on any subject included within the scope of Papers IV and V, in lieu of an examination in those two papers.

The conditions to be fulfilled by a candidate who is allowed to offer a thesis are as follows:—

(*a*) He must have completed one year's study of the M.A. course in Comparative Philology under University Teachers.

(*b*) He must, at the end of the year, submit to the Board of Higher Studies in Comparative Philology an application for permission to offer a thesis in lieu of part of the Examination.

(*c*) The application shall indicate the subject and scope of the thesis he wishes to offer and must be recommended by the Professor or Professors under whom he has been working.

(*d*) If the application be granted by the Board of Higher Studies in Comparative Philology, the thesis must be prepared under the general direction of the Professor or Professors with whom the candidate is prosecuting his studies.

(*e*) The candidate shall deliver three copies of the thesis (printed or type-written) to the Secretary to the Council of Post-Graduate Teaching in Arts, at least one month before the first day of the M.A. Examination at which he intends to present himself.

(*f*) The thesis shall be examined by a Board of three Examiners and the maximum number of marks assigned to the thesis shall be 200. The Examiners may, in their discretion, subject the candidate to a *viva voce* examination on the subject of the thesis.

(*g*) The name of a candidate whose thesis has been approved shall be marked with an asterisk in the list of successful candidates published in the Gazette and also in the University Calendar.

MENTAL AND MORAL PHILOSOPHY.

1 The course in Mental and Moral Philosophy shall be as follows:—

Paper I—History of Ancient and Mediæval European Philosophy.
,, *II*—History of Modern European Philosophy.
,, *III*—Indian Philosophy.

Papers IV and V—Theory of Knowledge and Metaphysics.
,, *VI and VII*—Any one of the following subjects to be selected by the candidate, two papers being set in each:—

(*i*) Psychology, (*ii*) Logic, (*iii*) Ethics and Social Philosophy, (*iv*) Philosophy of Religion, (*v*) Some special branch of Indian Philosophy.

Paper VIII—Essay.

2. Questions bearing on General Philosophy and Metaphysics may be included in any paper.

3. The limits of the subjects shall be defined and books shall be recommended from time to time by the Board of Studies concerned.

HISTORY.

1 The course in History shall be as follows:—

Paper I.—A selected period of English History.
Paper II.—A selected period of Indian History.
Paper III.—General History of the Ancient East.
Paper IV.—Constitutional History of England.
Paper V.—International Law.

Papers VI and VII.—Two papers in one of the following subjects to be selected by the candidate:—

(*i*) The History of Islam.
(*ii*) A special period of Indian History.
(*iii*) Economic History of England and India.
(*iv*) Comparative Politics.
(*v*) A special period of European History, or such other special subjects as may, from time to time, be prescribed by the Syndicate.

Paper VIII.—Essay.

2. Books shall be recommended and periods selected by the Board of Studies concerned, to indicate the extent and standard of knowledge required.

Candidates are permitted to offer the following Alternative course in Ancient Indian History and Culture, but candidates who elect to do so must possess a competent knowledge of Sanskrit so as to be able to refer to the sources in original:—

COMPULSORY PAPERS

1. General History of Vedic and Epic India.
2-3. Political History of the Post-Epic Period.
4. Historical Geography of Ancient India.

One of the following groups:—

(*i*) *Archæology.*

A.

5-8. Epigraphy, Palæography and Numismatics.

B.

5-8. Fine Arts, Iconography and Ancient Architecture.

(ii) Social and Constitutional History.

5. Social life, including manners, customs and ceremonies.
6. Economic life.
7. Administration.
8. Ethnology.

(iii) Religious History.

5. Vedic Religion.
6. Epic and Pauranik Religions
7. Buddhism.
8. Jainism.

(iv) Astronomy and Mathematics.

5 Astronomy
6 Astronomy.
7. Mathematics.
8. Mathematics.

(v) Anthropology.

5. Physical Anthropology including origin and antiquity of man.
6. Social Anthropology.
7. Pre-historic Archæology and Technology.
8. Indian Ethnography.

In each Group, a subject for an essay shall be set in one of the Papers, which will carry half the value assigned to that Paper.

The Board of Higher Studies may from time to time vary the alternative groups.

POLITICAL ECONOMY AND POLITICAL PHILOSOPHY.

1. There shall be two groups in this subject the first four papers being common to both, namely:—

For Groups A and B.

Papers I and II.—General Economics.

Paper III.—General Principles of Political Philosophy.
Paper IV.—Public Administration.

For Group A (Political Economy).

Paper V.—General History of Economics.

Papers VI and VII.—Two papers on one of the following subjects:—

(*i*) The History, Theory and Present Systems of Banking and Currency.
(*ii*) The History, Theory and Present Organisation of International Trade.
(*iii*) The Theory and Practice of Statistics, including Demography.
(*iv*) The Mathematical principles of Political Economy or such other special subjects as may, from time to time, be prescribed by the Board of Studies concerned.

Paper VIII.—Essay.

For Group B (Political Philosophy).

Paper V.—General History of Political Philosophy.

Papers VI and VII.—Two papers on one of the following subjects:—

(*i*) Comparative study of Political Institutions.
(*ii*) Comparative study of Social Institutions.
(*iii*) International Law with reference to existing Political and Economic Institutions.

Paper VIII.—Essay.

2. The limits of the subjects shall be defined and books shall be recommended from time to time by the Board of Studies concerned.

COMMERCE.

1. The course shall include the following subjects:—

Realistic Economics.
Business Organization.
Inland and Foreign Trade.
Industrial structure and development.
Accounting.
Commercial Law.
Economic History.
Economic Geography.
Currency.
Banking.
Insurance.
Transport.
Tariffs.
Public Finance.
Statistics.
Mathematical Economics.
Agricultural Economics.

Other subjects may be added to the above list from time to time by the Board of Higher Studies in Commerce.

2. One Paper shall be set in each subject unless the Board of Higher Studies otherwise determines.

3 Candidates shall be examined ordinarily in eight subjects; of these, not less than four and not more than six shall be compulsory subjects; the remaining subjects shall be left to the choice of the candidates.

The Board of Higher Studies in Commerce shall from time to time determine what subjects shall be deemed compulsory.

5. The limits of the subjects shall be defined and books shall be recommended from time to time by the Board of Higher Studies concerned so as to indicate generally the extent and standard of knowledge required.

6. This course will be open only to students who have taken Economics as a subject for the B.A. Examination, or have otherwise satisfied the Board that they possess a competent preliminary knowledge of that subject.

ANTHROPOLOGY.

The course in Anthropology shall include both Physical and Cultural Anthropology. Physical Anthropology shall be studied from the zoological, palæontological, physiological, psychological and ethnological point of view. Cultural Anthropology shall be studied from the archæological, technological, sociological, linguistic and ethnological point of view. The entire subject shall be treated with special reference to Indian conditions and problems past and present. Candidates shall be expected to possess a general knowledge of such subsidiary subjects as archæology, human anatomy, geography, psychology, zoology, physiology, statistics with special reference to biometrics, in so far as such acquaintance is necessary for the proper understanding of anthropology, but they shall not be required to pass a special examination in the subsidiary subjects.

Six theoretical papers of four hours each shall be set at the examination; there will also be an oral and practical examination extending over two days Each written paper shall carry 100 marks; and 200 marks shall be allotted to the oral and practical examination. In order to pass, a candidate must obtain 216 marks in the aggregate of the written papers, and 72 marks in the oral and practical examination; but if in any written paper, a candidate obtains less than 25 marks, those marks shall not be included in his aggregate. Candidates

obtaining 360 marks shall be placed in the Second Class and those obtaining 480 marks in the First Class.

Candidates may be permitted to substitute a piece of research work in lieu of written examination in two papers, provided they possess such qualifications, and fulfil such conditions as may, from time to time, be prescribed in this behalf by the Board of Higher Studies concerned.

Detailed syllabuses will be prescribed and books recommended from time to time by the Board of Higher Studies concerned, so as to indicate the extent and standard of knowledge required.

GENERAL.

1. (*a*) In order to pass in subjects I to XIV-A a candidate must obtain 288 marks in the aggregate. No minimum pass marks shall be required in each paper, but if in any paper a candidate obtains less than 25 marks, those marks shall not be included in his aggregate. Candidates obtaining 360 marks shall be placed in the Second Class, and those obtaining 480 marks in the First Class.

(*b*) In order to pass in subject XV (Mathematics) a candidate must obtain 264 marks. No minimum pass marks shall be required in each paper, but if in any paper a candidate obtains less than 20 marks, those marks shall not be included in his aggregate. Candidates obtaining 320 marks shall be placed in the Second Class, and those obtaining 400 marks in the First Class

(*c*) In order to pass in subjects XVI to XXIII a candidate must obtain 132 marks in the aggregate of the four theoretical papers, and 160 marks in the practical Examination. If in any theoretical paper a candidate obtains less than 25 marks those marks shall not be included in his aggregate. Candidates obtaining 360 marks shall be placed in the Second Class, and those obtaining 480 marks in the First Class.

2. As soon as possible after the Examination, the Syndicate shall publish a list of candidates who have passed in each subject, arranged in three classes and in order of merit. Candidates shall be bracketed together unless the Examiners are of opinion that there is clearly a difference in their merits.

Each successful candidate shall receive with his Degree of M.A. a certificate setting forth the subject in which he was examined, and the class in which he was placed.

3. The candidate who is placed first in the First Class in each branch shall receive a Gold Medal and a prize of books to the value of Rs. 200, and the candidate who is placed second in the First Class in each branch shall receive a Silver Medal and a prize of books to the value of Rs. 100.

CHAPTER XXXIV.

DOCTOR OF PHILOSOPHY.

1. Any Master of Arts of the University of Calcutta who has been placed in either the First or the Second Class at the examination for the Degree of Master, may offer himself as a candidate for the Degree of Doctor of Philosophy provided three years have elapsed from the time when he passed the examination.

2. Every candidate shall state in his application the special subject within the purview of the Regulations for the Degree of Master of Arts, upon a knowledge of which he rests his qualification for the Doctorate, and shall, with the application, transmit three copies, printed or type-written, of a thesis that he has composed upon some special portion of the subject so stated, embodying the result of research, or showing evidence of his own work, whether based on the discovery of new facts observed by himself, or of new relations of facts observed by others, whether constituting an exhaustive study and criticism of the published work of others, or otherwise forming a valuable contribution to the literature of the subject dealt with, or tending generally to the advancement of knowledge. The candidate shall indicate generally in a preface to his thesis and specially in notes, the sources from which his information is taken, the extent to which he has availed himself of the work of others, and the portions of the thesis which he claims as original; he shall further state whether his research has been conducted independently, under advice, or in co-operation with others, and in what respects his investigations appear to him to tend to the advancement of knowledge.

3. Every candidate may also forward with his application three printed copies of any original contribution or contributions to the advancement of the special subject professed by him, or of any cognate subject, which may have been published by him independently or conjointly, and upon which he relies in support of his candidature.

4. No application shall be entertained unless two Members of the Faculty of Arts, or two Doctors of Philosophy shall have testified, to the satisfaction of the Syndicate, that in habits and character the candidate is a fit and proper person for the Degree of Doctor.

5. Every candidate shall forward with his application a fee of Rs. 200. No candidate who fails to pass or present himself for examination shall be entitled to claim a refund of the fee.

6. The thesis mentioned in Regulation 2 and the original contribution, if any, mentioned in paragraph 3, shall be referred by the Syndicate to a Board of three Examiners.

7. If the thesis is approved by the Board and if the candidate has obtained a First Class at the examination for the Degree of Master of Arts, he shall not be required to submit to any further written examination; but he may be required by the Board, at their discretion, to appear before them to be tested orally, or practically, or by both these methods, with reference to the thesis, and the special subject selected by him. The Board shall report to the Syndicate the result of the examination of the thesis, and of the oral and practical examinations, if any; and if the Syndicate, upon the report, consider the candidate worthy of the Degree of Doctor of Philosophy, they shall cause his name to be published, with the subject of his thesis, and the titles of his published contributions (if any) to the advancement of knowledge.

8. If the candidate is a person who has obtained a Second Class at the examination for the Degree of Master of Arts, and, if his thesis is approved by the Board, he shall be required to submit to a written examination.

Two papers of three hours each shall be set, one upon the special subject mentioned in the application of the candidate, and the other upon the subject of the thesis. The candidate may also be required by the Board, at their discretion, to appear before them to be tested orally or practically or by both these methods with reference to the thesis and the special subject professed by him. The Board shall report to the Syndicate the result of the examination of the thesis, and of the written examination and also of the oral and practical examinations, if any; and if the Syndicate, upon the report, consider the candidate worthy of the Degree of Doctor of Philosophy, they shall cause his name to be published, with the subject of his thesis, and the titles of the published contributions (if any) to the advancement of knowledge.

9. In the case of a candidate falling under the preceding Regulation, if the Board upon an examination of his thesis and of his original contribution or contributions to the advancement of knowledge, hold the same to be generally or specially of such special excellence as to justify the exemption of the candidate from the written examination, he may be so exempted by the Syndicate, provided that the report of the Board shall set forth the fact and the grounds of such exemption.

10. A diploma under the seal of the University, and signed by the Vice-Chancellor, shall be delivered at the next Convocation for conferring Degrees to each candidate who has qualified for the Degree.

11. Every candidate shall be at liberty to publish his thesis, and the thesis of every successful candidate shall be published by the University with the inscription: "Thesis approved for the Degree of Doctor of Philosophy in the University of Calcutta"

CHAPTER XXXIV-A.

BACHELOR OF COMMERCE.

1. The examination for the Degree of Bachelor of Commerce shall be held annually in Calcutta and such other places, as shall, from time to time, be appointed by the Syndicate, the approximate date to be notified in the Calendar.

2. Any person may be admitted to the Examination who has prosecuted a regular course of study in one or more colleges affiliated to the University for this purpose not less than two academical years after passing the Intermediate Examination.

3. A student not belonging to any affiliated college who has prosecuted a regular course of study under University Professors or University Lecturers, may, on the recommendation of the Syndicate, by special order of the Senate, be admittted to the examination as a non-collegiate University student, anything in Chapter XVI of the Regulations to the contrary notwithstanding.

4. Every candidate shall produce a certificate, (*a*) of good conduct and (*b*) of diligent study, and shall send in his application with a certificate in the form prescribed by the Syndicate to the Controller of Examinations in time so that it may reach his office at least six weeks before the date fixed for the Examination.

5. A fee of Rupees Forty-five shall be forwarded by each candidate along with his application. A candidate who fails to pass or to present himself for examination shall not be entitled to claim refund of the fee. A candidate who fails to pass may be admitted subsequently to one or more Degree Examinations in Commerce on payment of a like fee of Rupees Forty-five. Provided he produces a certificate of good conduct and diligent study for six months before the examination from the Head of an affiliated College or a University Professor or Lecturer in his subject or any other authority approved by the Syndicate.

6. The Degree Examination in Commerce will be conducted by means of printed papers, the same papers being used at every place where the Examination is held.

7. As soon as possible after the Examination, the Syndicate shall publish a list of the candidates who have passed, arranged in two divisions, the first in order of merit, and the other in alphabetical order. Every candidate on passing shall receive a certificate in the form prescribed.

8. Every candidate shall be examined in the following subjects:—

(1) Composition in an Indian Vernacular other than the Vernacular of the candidate or French or German or Chinese or Japanese; the questions set to include a test of candidate's knowledge of, and ability to use, commercial terms and phrases in general use in that Vernacular or language.

The Syndicate specified the following Vernacular languages:—Bengali, Hindi, Uriya, Assamese, Urdu, Burmese, Modern Armenian, Modern Tibetan, Khasi, Nepali, Telugu, Marathi, Gujrathi, Maithili, Tamil, Kanarese, Malayalam, Sinhalese. The Syndicate may add to the list.

(2) General Economics.
(3) Indian Economics.
(4) Accountancy.
(5) Economic Geography.
(6) Business Organisation including Commercial Correspondence.
(7) Inland or Foreign Trade.
(8) Elementary Commercial Law.
(9) One of the following subjects:
(*i*) Advanced Accountancy and Auditing.
(*ii*) Banking and Currency.
(*iii*) Industrial Organisation.
(*iv*) Agricultural Economics.
(*v*) Economics of Transport.
(*vi*) Public Administration.
(*vii*) Public Finance.
(*viii*) Statistics.
(*ix*) Tariffs.
(*ix-a*) Modern Economic History.
(*x*) Such other subject or subjects as may me prescribed by the Syndicate, from time to time, on the recommendation of the Board of Studies concerned.

9. One paper shall be set in each of the subjects (1)—(8) and two papers shall be set in the subjects chosen by the candidate from (9). Each paper shall be of three hours and shall carry 100 marks.

10. The limits of the subjects shall, from time to time, be defined by the Syndicate on the recommendation of the Board of Studies concerned.

11. In order to pass a candidate must obtain 30 per cent. of the marks in each paper and 40 per cent. of the marks in the aggregate. In order to be placed in the first division, he must obtain 60 per cent. of the marks in the aggregate.

12. The following Syllabus defines the limits of subjects prescribed for the B.Com. Examination:—

GENERAL ECOMONICS.

(COMPULSORY PAPERS.)

Definition and scope of economics—relation to psychology, ethics, politics and sociology—methods of study—fundamental economics concepts—wealth, utility, capital, income and value —consumption—the law of demand—elasticity of demand—wants and activities—production—factors of production—the laws of return—the law of population—modern industrial organisation—types of business organisation—problems of industrial combination—trust and cartels—market—theory of value—joint demand and joint supply—distribution—National income—rent, wages, interest and profits—Labour problems—exchange—money—value of money—index numbers—appreciation and depreciation—credit and prices—systems of money—monometallism and bimetallism—paper money—functions of banks—banks and credit—bank investments—Bank of England—money market—international trade—international values—the law of comparative cost—distribution of precious metal—balance of trade—mechanism of international payments—foreign exchange —fiscal policy—public finance—equity in taxation—incidence of taxation—direct and indirect tax—progressive and proportional tax—export and import duties—economics and progress.

INDIAN ECONOMICS.

(1) *Geographical Factors*—Physical features affecting the economic life of the people—facilities of transport.

(2) *Special Factors*—Village system and rural economy—peasant proprietorship—caste—its economic significance—its influence on organisation of Indian industries—joint family—laws of inheritance—status and custom and their influence on rents, wages and prices—organisation of agriculture, handicrafts and domestic industries of rural India—caste guilds—city industries—Muhammadan guilds and industries—indigenous organisations of trade, transport, banking and agricultural credit.

(3) *Political Factors*—Pax Britannica—its economic effects —chief British-Indian systems of land tenure—their economic consequences—foreign capital and organisation of labour, etc.—their influence on economic development—political relations of India to England—effect on balance of trade.

Application of principles of Economics to Indian Consumption, Production, Distribution and Exchange.

(1) *Consumption*—Indian standard of life as determining Indian consumption—comparison with other countries—statistics of consumption.

(2) *Production*—Special conditions of production in India —defects of Indian agriculture—fragmentation and subdivisions of holdings—agricultural indebtedness—co-operative movements —efficiency of labour—cost of production in different industries of India—capital requirements—technical education.

(3) *Distribution*—(*a*) Rent—as effected by State landlordism —by Permanent Settlement—pressure of population—land laws —custom.

(*b*) Wages of different employments—average rates—purchasing power of wages.

(*c*) Profits of manufacturer—of middlemen—as money-lenders and as commercial agents.

Exchange and Currency—History of Indian currency—reserve-standard—recommendations of Currency Committees and Commissions—present condition and future prospects of the rupee.

Main constituents of the Indian banking system—Imperial Bank—Exchange Banks—Indian Joint Stock Banks.

Public Finance—Sources of revenue and heads of expenditure—Home charges—capital expenditure, loans and debts—division of revenue between Imperial and Provincial Governments—resources of local bodies.

Tariffs and Industrial Policy—Two aspects of import duties —cotton excise—recommendations of Indian Industrial and Fiscal Commissions—State *vs*. Company ownership and management of Railways.

ACCOUNTANCY.

I. Objects of book-keeping—

(*a*) Business—exchange of money, goods and services.
(*b*) Transactions—parties—accounts.

II. Principles of double-entry book-keeping—its theory, methods and adaptability to all classes of transactions.

III. Books of account—

(a) Journal, including cash book, purchases book, sales books, returns books (inward and outward), bills receivable and payable, books and journal proper, petty cash books, methods of journalising.

(b) Ledger, including the use of bought ledger, sales ledger, general or nominal ledger, private or proprietors' ledger, methods of posting.

IV. Treatment of cheques, Bills of Exchange and other Negotiable Instruments—Bank deposits and withdrawals—discounts—Bank reconciliation

V. Preparation of a preliminary Trial Balance.

VI. Preparation of the income sheet and the balance sheet—

(a) Adjustments to be journalised—depreciation, bad debts, items of income and expenses outstanding, items of incomes received and expenses paid in advance, writing off fictitious assets, closing stock, reserves.

(b) Casting, balancing and closing the accounts of the ledger, journalising, closing entries.

(c) Preparation of the final Trial Balance and classification of items into capital and revenue.

(d) Preparation of income sheet, including the subdivisions, *viz.*, manufacturing account, trading account, profit and loss account, profit and loss appropriation account.

(e) Preparation of the balance sheet—grouping and arrangement of balance sheet items—classification of assets—working capital—capital debt.

VII. Consignments—inward and outward.

VIII. Higher problems on Bills of Exchange. Consignments, trading and profit and loss accounts and balance sheets.

IX. Single-entry book-keeping—meaning, method and defects—conversion into double-entry book-keeping.

X. Income and expenditure, account and receipts and payment accounts as in the case of charitable, religious, educational, administrative and similar institutions.

XI. Partnership accounts—salary and interest of partners—good will and incoming or outgoing partners—dissolution of partnership.

XII. Joint-Stock companies—public and private

(a) Formation—memorandum and Articles of Association and Prospectus.

(b) Statutory books.
(c) Accounts—special points.
(1) Entries relating to shares and debentures—application, allotment and calls, forfeiture—transfer.
(2) Preparation of the final accounts and the balance sheets—statutory form of accounts—distinction from the forms of accounts of partnerships.

XIII. Criticism of the balance sheet—How to read the balance sheet

XIV. Commercial terms.

ECONOMIC GEOGRAPHY.

1. Why we should study Economic Geography—its nature and scope—relation to other sciences.

2. Physical factors bringing about variation in the economic life of a people.

3. Non-physical causes effecting economic life—race—religion—Government—density of population—historical usage and customs—geographical inertia.

4. Different industries of the world—hunting—pastoral—mining—agricultural—manufacturing—factors bringing about localisation.

5. Different methods of transport—land—water—air—their advantages and disadvantages—routes of international importance—causes that bring about changes in the volume and direction of traffic.

6. Development of ports and inland trade centres—principles and illustrations.

7. Coins and currencies of important countries of the world—weights, units of sale and units of shipment of principal commodities to and from various countries.

8. Geographical distribution of principal commercial commodities—conditions affecting their production and carriage—their chief markets.

9. Economic geography of the principal countries of the world—climate, soil, etc.—distribution of population—principal economic products—chief industries—ports and cities—communications—trade balance and trade relationship.

10 Economic geography of India in detail.

11. Prospects of economic development of different countries.

BUSINESS ORGANISATION INCLUDING COMMERCIAL CORRESPONDENCE.

1. Economic basis of trade and industries—classification of trade and industries.

2. Different forms of business organisation—individual proprietorship—partnership—joint stock companies—co-operative societies—federation organisations—trusts—cartels—holding companies—amalgamation.

3. General knowledge of the management of factory—division of labour—various departments—control—efficiency of labour—how to improve it.

4. Organisation of office—various departments—co-ordination—labour-saving devices—codes.

5. Organisation of trade—home, foreign—wholesale, retail departmental store—multiple shops—co-operative societies—broker and middlemen—their functions and remuneration.

6. Tariffs—customs—and commercial practices in different countries.

7. Financing of trade and industries—commercial banks—industrial banks—agricultural banks—stock exchanges—investment trusts—clearing houses—various methods of inland and foreign remittances.

8. Produce exchanges—transaction in futures—speculation.

9. Insurance organisation—various classes.

10. Advertisement—various methods.

11. Organisation of chief industries and trades of India.

12. Preparation of commercial instruments—writing of business letters—precis writing—indexing—docketing.

INLAND AND FOREIGN TRADE.

1. Meaning of trade—what it consists of—classification of trade—necessity for different classes—their evolution and present tendency.

2 Distinction between inland trade and foreign trade—their relative importance in different countries—theory of comparative costs—international values.

3. Procedure for export and import trade—for inland trade—documents used—invoice—bill of lading—charter party— railway receipt—insurance policy, etc.

4. Customs formalities—theory of tariffs—bonded warehouse—warehousing.

5. Financing of trade—both inland and foreign—foreign exchanges—bill of exchange—letter of credit—methods of financing trade in different countries.

6. Institutions for the furtherance of trade, both State and private—representation of commercial interests in foreign countries.

7. Review of trade—recent tendencies.

8. Market quotations and market reports.

COMMERCIAL LAW.

Nature and scope of Commercial Law—Commercial law—its scope and nature—sources of Indian mercantile law—its growth—growth of commerce and its relation to commercial law—the present Indian mercantile law—the different branches.

The Law of contract—Law of Contract in India—agreement and contract—essentials of contract—communication, acceptance and revocation of proposal—voidable contract and void agreement—effect of coercion—undue influence, fraud, misrepresentation and mistake—parties and legal capacity to contract—form and consideration—agreement opposed to morals and public policy—agreement by way of wages—contingent contract—novation—rescission—alteration—appropriation of payment—breach of contract—termination of contract—relationship resembling those created by contract—contract of indemnity and contract of guarantee—surety's liability—discharge of surety—rights of surety—co-sureties.

Parties to and subject-matter of contract—Agency—Definition of principal and agent—who may employ an agent and who may be an agent—sub-agent—ratification—termination of agency—agent's duty to principal—principal's duty to agent—undisclosed principal—personal liability of agent—unauthorised acts of agents.

Partnership—Definition—the firm's name—the incidents—minor partner—principle of "holding out"—powers and duties of partners—dissolution of partnership—deceased partner's estate—rights and obligation of partners after dissolution—goodwill.

Sale of goods—Goods defined—sale how effected—ascertained, un-ascertained and non-existent goods—rights of buyer and of seller—sellers' lien—stoppage in transit—resale—title to

goods—sale by sample or by denomination—warranty—sale of auction.

Bailment—Definition—bailor and bailee—bailee's responsibility—termination of bailment—right of finder of goods—bailee's lien—pledge, pawner and pawnee—right of bailee against wrong-doer.

Mortgage—Source of the Law of Mortgage—definition—simple mortgage—mortgage by conditional sale—English mortgage—usufructuary mortgage—equitable mortgage—rights and liabilities of the mortgagor—rights and liabilities of the mortgagee—puisne mortgage—mortgage of movable property.

Negotiable Instruments—Definition—the incidents and peculiarities of Negotiable Instruments—the forms—consideration—the holder in due course—the parties—acceptance—indorsements—presentment for acceptance and payment—dishonour—discharge of parties—noting and protesting—presumptions in case of Negotiable Instruments—crossing—Hundies.

Company Law—Source—public and private companies—Memorandum of Association—prospectus—capital—reorganization of share capital—reduction and increase of share capital—Articles of Association—commencement of business—shares—stocks—directors—meeting of shareholders and of directors—modes of voting—resolutions—statutory books—accounts—auditors—liquidation or winding up—voluntary liquidation, liquidation under supervision, and compulsory liquidation—contributories—powers and duties of liquidator—preferential payments.

The contract of carriage—Common carrier—railway companies—carriage of goods by sea—contracts of affreightment—Charter-party—the clauses of the Charter-party and their peculiarities—Lay days—demurrage—Bills of Lading—Master of the ship—his rights and duties.

Law of Arbitration—Source of the Law of Arbitration in India—submission—who may refer to arbitration—who can be arbitrator—appointment by Court—vacancies—powers and duties of arbitrator—the umpire—removal of arbitrator or umpire—the award—modification and correction of the award—setting aside of award—judgment on award.

A very brief outline of the laws relating to Patents, Trade marks, Copyright.

ADVANCED ACCOUNTANCY AND AUDITING.

(OPTIONAL SUBJECTS.)

Advanced Accountancy—In addition to the Syllabus for the compulsory paper and a more comprehensive study of the same, the following are also laid down:—

I. Self-balancing ledgers.

II. Departmental and branch accounts.
III. Joint venture accounts.
IV. Royalty accounts—hire purchase accounts.
V. Double accounts systems.
VI. Bankruptcy—statement of affairs and deficiency accounts.
VII. Principles of book-keeping as applied to Bank and Insurance Companies, and forms of accounts in each case.
VIII. Miscellaneous Accounts.

Auditing—Meaning of an audit; object of an audit. Preliminaries of an audit. Audit of the books of original entry. Cash Book audit. Internal check system. Methods of checking. Audit of nominal or general ledgers, of Sale and Bought ledgers. Audit of final figures as appearing in a Revenue account, Profit and Loss account and Balance sheet. Continuous and periodical audits. Qualifications required by an auditor, etc.

BANKING AND CURRENCY.

Banking Theory—The functions and economic services of different kinds of banks—commercial banks—exchange banks—industrial banks—savings banks—agricultural banks—investment banks—mortgage banks—private banks—labour banks—special kinds of banks—Re. to Indian banking condition—bird's eye-view of English, Continental and American banking systems.

General Structure and Methods of Commercial Banking—The accumulation of the working capital—deposits—cheques—effect on price level—bank drafts and inland remittances—the management of banking resources—the short-term loan fund—market rate of discount—loans and advances—investments—acceptances—cash reserve—Profit and Loss—Bank failures—recent tendencies of commercial banks—relations with the Central Bank and the other members of the Money Market—Clearing House—the Big Five—the Four D's of Germany—the National Banks of America—the Commercial Banks of India—The Imperial Bank of India.

Centralized and decentralized banking—Duties of the Central Bank—co-operation with the other Central Banks—monetary stability—the Bank of England—the Central Bank proposal for India—the Central Banks of other countries.

The Stock Exchange—Its relation to the banking system—speculation—functions of the speculative dealers—the bulls and the bears—The constitution of the Bombay and Calcutta Stock Exchanges—modern problems connected with them.

Foreign Exchange—Functions of the Indian Exchange Banks—general principles of financing exports and imports—the letter of credit—confirmed and unconfirmed credit—London Acceptance Credit—arbitrage—fluctuations in rate of exchange—effect and remedies—effects of war on exchanges—reading of the Money Market article—practical conversion of exchange.

Practical Banking—Relations beween banker and the customer—the deposit receipt—the opening of current account—cheques and bills of exchange—personal element and securities—collection of cash articles—daily balances—the general ledger—discounting bills—purchase and sale of stocks and shares—foreign exchange business—gratuitous services.

Bank management—Duties of directors, shareholders, and managers—services of bank officers—cashier—inspectors—desirable qualities of bank officers—incorporation of banks—banker and the pass-book—banker and advances against securities—against goods and documents of title to goods—banker and miscellaneous securities.

Banking Law—Banks and guarantee—Banks and Negotiable Instruments—different kinds of customers—Banker's Book Evidence Act—Banker's lien—Banking Legislation in America and India.

General Banking statistics—The Bank Balance-sheet—Capital—Reserve—total immediate liabilities—proportion of cash to outstanding liabilities—profitable and non-profitable assets—Clearing House figures—Bank rate—their scope and meaning—Indian blue book on banking statistics—Banker's almanac.

CURRENCY.

Currency—Economic importance of money. Importance of the study of money. Definition of money. Origin of money. Functions of money. Qualities of a good money material. Is money wealth? Money and prosperity. Evolution of metallic money and coinage. Evolution of paper money.

Coin—Invention of coinage. Requisites of good coinage. "Limit of tolerance." "Seigniorage, brassage, gratuitous and free coinage." "Mint price of gold." Standard money. Token money. Legal tender. English coinage acts.

Currency deterioration. Gresham's Law. Bimetallism. Gold Standard. Gold Exchange Standard.

Decimal Coinage—Value of money. Index numbers. Price movements in recent years. Effects of price fluctuations. Monetary stability.

Credit—Convertible paper money. Inconvertible paper money, "Deposit currency" or "Circulating credit."

Effects of the Great War on Money and Foreign Exchange.

Indian Currency—Coinage Act of 1835. Fall of the price of silver. Effects of the fall. Closure of the Mints. Fowler Committee. Evolution of Gold Exchange Standard. Paper Currency Act of 1861. Reserves and Balances. Effects of the War on Indian Currency and Exchange.

INDUSTRIAL ORGANISATION.

General industrial economy—Organisation of industries—handicraft system—Guild system—Capitalistic system—importance of Machinery—the place of labour—modern marketing organisation—commercial crisis and industrial depression—modern large scale industries—geographical causes of their existence—the importance of raw materials—mobility of the factors of production—International Capital market—industrial finance—monopolistic tendencies—Trusts and Cartels—Labour organisation—Labour legislation—industrial disputes—the problem of minimum wage—arbitration—joint industrial councils—industrial education.

Industrial organization of India—Study of occupations—importance of agriculture—agricultural organisation—systems of land tenures—agricultural finance—co-operation—agricultural labour—State and agriculture.

Cottage industries—Decline of handicraft—growth of large-scale industries—industrial deficiencies—special advantages—raw material and other natural resources—the problem of power—industrial labour—efficiency of labour—Labour legislation and Labour organisation—technical education—foreign capital and management—special study of the development of cotton, jute, iron and steel, coal and leather industries—industrial finance—State and industry—Fiscal Policy and Indian industries.

PUBLIC ADMINISTRATION.

Fundamental concepts—Sovereignty, State, Law, Constitution and Government.

Origin and Supremacy of Law—Law— Administrative Law —Criminal Law—International Law—Municipal Law—Public Law—Private Law.

Meaning of Constitution—Characteristics of the English Constitution—its constituent elements—Laws and conventions

of the English Constitution—some written constitutional documents of England—Constitutions of England and U. S. contrasted and compared.

Functions of Government—Distribution of Government powers, territorially and functionally—Separation of Government powers—the Executive, the Legislative and Judicial power—Government a unity.

The Executive of England—The Crown, the legal or formal Executive—the Executive, legislative and judicial powers of the Crown—the Prerogative—its nature and sources—present state of the Prerogative—Meaning of the expression "The King can do no wrong." Examples of the exercise of Royal prerogative—the Veto.

Cabinet, the real or political Executive—principal features of the Cabinet—difference between Cabinet, Ministry and Privy Council—legal position of the Prime Minister—solidarity of the Cabinet—the Cabinet or Parliamentary system of Government—parliamentary and non-parliamentary executive—illustration—the doctrine of Cabinet responsibility—recent changes in the Cabinet system—the War Cabinet—the Cabinet Secretariat.

The general machinery of Government—the Executive Departments—the Ministers and the permanent Civil Service—the Treasury—its importance—control over expenditure by the Executive and Parliament—the Budget, its meaning and purpose—the Consolidated Fund charges and supply services—the Finance Bill—the Appropriation Bill—the Money Bill.

The Legislature—The Franchise—the House of Commons—character of the House of Commons before 1832—changes in its constitution by the Reforms Acts of 1832, 1867, 1884, 1885 and 1918—functions of the House of Commons—how it controls the administration—its power over finance—privileges of members—the Speaker, his powers and functions—procedure of legislation—private bill legislation—private members' bills—relation between the Cabinet and the House of Commons—causes of the growing power of the Cabinet. House of Lords—its composition—its functions—its judicial powers—its defects—the reasons for its reform—relation between the House of Commons and House of Lords—reasons for the waning influence of the House of Lords—the Parliament Act of 1911.

The Judiciary—The King is the fountain of justice—criminal and civil justice—organisation of the Courts—appellate Courts—the Judicial Committee of the Privy Council—the House of Lords as a judicial body—guarantees for the proper administration of justice—difference between law and equity.

Local Government system—Necessity of dividing Government functions into Central and Local—principles of this division

—Central control over local authorities in England—Local Government Board—its powers and functions—contrasted with the Local Self-Government Department of a provincial administration in India.

Central organisation of local authorities in England—the Borough Council, the County Council, the London County Council, the Corporation of the City of London—powers and duties of local authorities in England—their sources of revenue—local taxation—borrowing—nature of local expenditure.

Colonial Government—Constitution of crown colonies, Protectorates, Mandated territories, Dominions—the development of responsible Government in the Colonies—Lord Durham's Report—present position of the Dominions. The Dominion Governor—his powers, duties and prerogatives—his position in relation to the Crown and the Cabinet—relation between the Governor and the Executive Council and the Legislature—Upper and Lower Chambers of the Legislature—relation between the Upper and Lower Chambers—their composition—powers of the two Chambers—difference between the House of Commons and the Lower Chamber.

Federations and Unions—Constitutions of Canada. South Africa and Australia compared—Imperial Federation—Imperial co-operation during and after the war—Imperial Conference—its scope and powers—as a means of binding the colonies to the mother country. 'Defence—foreign relations.'

Government of India—A brief historical survey of the development of the Indian Constitution—characteristics of the Indian Constitution—The Executive: machinery of the Government of India—the Secretary of State and his Council—composition and powers of the Council—control of the Secretary of State over the administration—the Governor-General and the Provincial Governor—relation between the three authorities—Central Executive Council—Central and Provincial subjects of administration—Reserved and Transferred subjects of Provincial Governments—Central control over these subjects.

The Executive Council of a Governor—the Ministry—relation between the two—defects of the dyarchical form of government—financial administration of the transferred and reserved subjects.

The Departments of the Central and Provincial Governments—general administrative machinery of these two Governments. Principal sources of revenue—principal items of expenditure—classified into centra, reserved, transferred—powers of borrowing and taxation of Provincial Governments—famine administration—the Railway Board—its relation to the Central Government.

The Central Legislature—the Council of State and Assembly—their composition—relation between the two Chambers—their powers and functions.

The Provincial Legislature—its composition—its powers and functions—its control over administration and finance.

The Judiciary—organisation of the Courts—constitution and powers of the High Courts—Civil and Criminal justice—judicial powers of the Executive.

Local Government—Development of the Local Government system—powers, duties and jurisdictions of district boards, municipalities, local boards and village unions—the main provisions of the Bengal Village Self-Government Act—sources of revenue of the local authorities—their powers of taxation and borrowing—objects of local expenditure—central control over local authorities.

Constitution of the Presidency corporations—their special powers and duties.

Native States—their powers, duties, rights and privileges—their relation to the Government of India—their usefulness in the Indian Polity.

STATISTICS.

(1) Meaning and scope of statistics. Historical development of statistical science. Fundamental principles.

(2) General methods of statistical investigation. Collection of statistical data. Determination of statistical unit. Sources of data. Estimation. Classification of statistical observation.

(3) Tabular presentation—single tables—frequency tables—correlation tables—abstraction—mechanical tabulations.

(4) Diagrammatic presentation—Cartogram—Bar Diagram—Polar Diagram—Gnatt Chart—Surface diagrams—rectangular—circular. Volumes of three dimensional diagrams—conventional forms—picture Stereograms.

(5) Graphic presentation—histograms—simple percentage cumulation. Historigrams—absolute percentage—logarithmic Index historigrams—Trend.

(6) Averaging—types of averages—simple—weighted—geometric—harmonic—modal—median—moving average—statistical co-efficient.

(7) Methods of dispersion—meaning and purpose—absolute and relative dispersion—the Range—mean deviation—standard deviation—quartile deviation—' mean difference '—Watkin's Index of Variability—skewness.

(8) Principles of Index number making and using—the Base—the choice of an average weighing method of aggregates—relative of aggregates—average of relatives—chain averages.

(9) Interpolation—graphic and simple algebraic methods.

(10) Correlation and ratio of variation. Karl Pearson's Co-efficient of Correlation. Application to groups—series—long time and short time fluctuations. Methods of concurrent deviation—Lag—Galton Graph and regressions.

(11) Application of statistical methods to Indian commercial problems—prices—wages—trade transport—certain sources of official statistics in India.

TARIFFS.

The rationale of free trade—The arguments of the Classical School—The theory of territorial division of labour and the theory of comparative cost.

Impediments to international trade—protective duties—the effect of protection on the National Dividend—arguments for protection—political and economic—infant industries and diversification of industries; dumping and stability of production—anti-dumping laws. The tariff as a factor in the economic prosperity of nations—discriminating protection—Report of the Indian Fiscal Commission.

The evils of protection—burden on the consumers—tariffs and trusts; tariffs and inefficient methods of production. Effects of tariff on the distribution of wealth—on wages and rent—interest and profits.

Protective and revenue duties—import duties—their incidence—the effects of import duties on the price of dutiable articles.

Export duties for revenue and protection—The consideration of the Indian export duties.

Reciprocity, Retaliation and Preference—Preference within the British Empire—Indian and Imperial Preference.

Commercial treaties in their relation to the operation of the Most Favoured Nation Clause—the Conditional and the Unconditional interpretation—classification of tariffs.

Problems of tariffs administration—comparative merits of *ad valorem* and specific duties—administrative difficulties connected with *ad valorem duties*—problems of valuation. Alleviations of the Protectionist Regime—free ports, bonded warehouses and drawbacks.

Tariff history—the development of commercial policy in India—the Indian import duties in revenue and protective aspects—the Cotton Excise controversy—the post-war developments in Indian fiscal policy—the work of the tariff boards. The development of commercial policy in Great Britain, France, Germany and the U. S. A.

MODERN ECONOMIC HISTORY.

Economic History of England—Elizabethan England—policy of Burleigh. Trade and Trading companies. Colonisation. Agriculture and industry. Industrial revolution. Agriculture revolution. Inland and oceanic transportation. Origin and growth of banking. Factory legislation. Reforms of the Poor Law. Free Trade and Protection. Co-operation. Trade Unionism.

Economic History of India—Decline of handicrafts. Rise and progress of modern industry. Agriculture, Communication. Trade and commerce. History of currency and banking. Growth of towns. Factory legislation. Co-operative movements. Labour.

ECONOMICS OF TRANSPORT.

Economics of Railway transport—Capital and revenue expenditure. Gross and net receipt. Economics of Railway construction and maintenance. Growth of passenger traffic. Passenger fares. Influence on distribution of population. Freight rates and their theory. Rate-making in practice. Influence on production costs, on rates. Classification of goods. Special rates. Discrimination. Maximum and minimum rates. Competition. Long and short haul traffic. Traffic pools. Effects on rates and fares of State ownership and State guarantees of interest. Influence of Railway rates on the distribution of industries and on inland and foreign trade.

Economics of road transport—Economics of road construction and maintenance. Theories of fares and rates. Variations caused by types of road transport. Competition. Relation of road to railway transport. Effects of municipal ownership on local government financial aid.

Organisation of Indian Railways—Relation to the State. Ownership and control. Relation to one another. Internal administrative and executive organisation. Problem of gauge. Standardisation of equipment and rolling stock. Railway Rates Committee. Railway finance.

Organisation of road transport in India—Relation to the State and local authorities—the road—the types of road transport—the tramway—the motor-omnibus—the taxicab—the goods and parcels carrier—private vehicles—roads and road transport as supplementing the railways.

Inland Waterways in India—Navigation of rivers and canals in India—their importance and their place in the general transport system of the country.

CHAPTER XXXV.

INTERMEDIATE EXAMINATION IN SCIENCE.

1. The Intermediate Examination in Science shall be held annually in Calcutta and such other places as shall, from time to time, be appointed by the Syndicate, the approximate date to be notified in the Calendar.

2. Any undergraduate of the University may be admitted to this examination, provided he has prosecuted a regular course of study in one or more Colleges affiliated for this purpose, for not less than two academical years after passing the Matriculation Examination.

Any student who has passed the Intermediate Examination in Arts may take up the course of the Intermediate Examination in Science at the second year's stage, and after one year's regular course of study appear at the examination. He will be excused attendance and examination in the subject or subjects in which he has already passed at the Intermediate Examination in Arts.

3. Every candidate sent up for the Intermediate Examination in Science by an affiliated College shall produce a certificate (*a*) of good conduct, (*b*) of diligent study, (*c*) of having satisfactorily passed the College Examinations and other tests, and (*d*) of probability of passing the examination. Every candidate for admission shall send in his application with a certificate in the form prescribed by the Syndicate either to the Registrar or to a local officer recognised by the Syndicate. Every such application must reach the office of the Registrar at least six weeks before the date fixed for the commencement of the examination.

4. A fee of rupees thirty shall be forwarded by each candidate with his application. A candidate who fails to pass or to present himself for examination shall not be entitled to claim a refund of the fee. A candidate who fails to pass may be admitted to any one or more subsequent Intermediate Examinations in Science on payment of a like fee of rupees thirty on each occasion, provided he produces a certificate from the Head of an affiliated College showing that he has prosecuted a regular course of study for one academical year since the date of the last examination, in each of the subjects in which he is to be examined.

5. The Intermediate Examination in Science shall be conducted by means of printed papers, the same papers being used at every place at which the examination is held.

6. As soon as possible after the examination, the Syndicate shall publish a list of the candidates who have passed, arranged

in three divisions, the first in order of merit, and the second and third in alphabetical order. Every candidate shall on passing, receive a certificate in the form entered in Appendix A.

7. The subjects for the Intermediate Examination in Science shall be—

1. English ... ... *Three papers.*
2. One of the following vernacular languages:—Bengali, Hindi, Uriya, Assamese, Urdu, Burmese, Modern Armenian, Modern Tibetan, Marathi, Khasi, Nepali (Parbatia), Maithili, Gujrathi, Telugu, Tamil, Kanarese, Malayalam, Sinhalese, Portuguese, Persian *One paper.*

The Syndicate shall have power to add to this list.

If the vernacular of a candidate is a language not included in the above list, he shall have an alternative paper of a somewhat advanced character in English.

3. Chemistry ... ... *Two papers.*
4. Mathematics or Physics (*Two papers in either subject*).
5. Any one of the following subjects:— *Two papers.*

(*i*) Mathematics, if not taken up as the 4th subject.
(*ii*) Physics, if not taken up as the 4th subject.
(*iii*) Botany.
(*iv*) Zoology.
(*v*) Geology.
(*vi*) Geography.
(*vii*) Physiology.
(*viii*) Biology.

8. Candidates may also be examined, if they so desire, in an additional subject included under 5, provided they have not already taken the subject, or in French or German. In this optional subject there shall be two papers of three hours each.

9. No student shall be permitted to take up Mathematics for the B.Sc. Examination unless he has taken it up for the Intermediate Examination.

No student shall be permitted to take up Physics or Chemistry for the B.Sc. unless he has taken up both Mathematics and Physics for the Intermediate Examination.

10. Each paper shall be of three hours, and shall carry 100 marks.

11. No practical examination will be held by the University in connection with the science subjects in the Intermediate Examination in Science, but every student who desires to be examined in any such subject must produce a certificate from the

Principal of his College to the effect that he has completed in an affiliated College the corresponding practical course prescribed by the Regulations.

12. The limits of the above subjects for both theoretical and practical work are defined below:—

ENGLISH, VERNACULARS, FRENCH, GERMAN.

As in the Intermediate Examination in Arts.

MATHEMATICS.

1. *Algebra.*

Theory of Quadratic equations and expressions.
Simultaneous Quadratic equations one of which is linear.
Permutations and Combinations.
Variation: proportion.
Binomial theorem.
Theory of Indices.
Surds and imaginary quantities.
Logarithms.
Exponential and Logarithmic Series.
Graphs of simple algebraic functions and of the exponential and logarithmic functions

2. *Plane Trigonometry.*

Measurement of Angles.
Trigonometrical ratios.
Application of algebraic signs; angles of any magnitude.
Graphs of trigonometrical ratios.
Elementary trigonometrical formulæ and their applications
Logarithmic Sines, Cosines, etc.
Relations between the sides and angles of a triangle.
Practical solutions of triangles with application.

3. *Geometry.*

(*a*) Parabola.
Tracing the curves from the definition.
Latus rectum is four times the focal distance of the vertex.

$$PN^2 = 4\ AS.\ AN.$$

The middle points of parallel chords lie on a straight line parallel to the axis. The parameter of any diameter of a

Parabola is four times the line joining the focus with the vertex of the diameter.

$$QV^2 = 4SB.\ BV.$$

If any chord QQ′ intersects the directrix in D, SD bisects the exterior angle between SQ and SQ′.

The tangent to the curve at its points of intersection with a diameter is parallel to the system of cords bisected by the diameter.

The portion of the tangent at any point intercepted between that point and the directrix subtends a right angle at the focus.

The tangent bisects the angle between the focal distance and the perpendicular on the directrix.

The sub-tangent is bisected at the vertex.

The normal at any point makes equal angles with the focal distance and the axis.

The subnormal is equal to half the latus rectum.

(*b*) Ellipse.

Tracing the curve from the definition.

The curve is symmetrical with regard to the minor axis and has a second focus and directrix.

$$CS.\ CX = CA^2.$$
$$SP + S'P = AA'.$$
$$CB^2 = SA.\ SA'$$

If any chord QQ′ of an ellipse intersects the directrix in D, SD bisects the exterior angle between SQ and SQ′.

$$PN^2 : AN.\ A'N = CB^2 : CA.^2$$

The middle points of parallel chords lie on a straight line passing through the centre.

The tangent to the curves at either end of a diameter is parallel to the system of chords bisected by the diameter.

The portion of the tangent at any point intercepted between that point and the directrix subtends a right angle at the focus, and conversely.

The tangents at the ends of a focal chord intersect on the directrix.

The tangent at any point of an ellipse makes equal angles with the focal distances of the point.

(c) Solid Geometry.

One and only one plane may be made to pass through any two intersecting straight lines.

Two intersecting planes cut one another in a straight line and in no point outside it.

If a straight line is perpendicular to each of two intersecting straight lines at their point of intersection, it is also perpendicular to the plane in which they lie.

All straight lines drawn perpendicular to a given straight line at a given point are co-planar.

If two straight lines are parallel and if one of them is perpendicular to a plane, the other is also perpendicular to the same plane.

Of all straight lines drawn from an external point to a plane, the perpendicular is the shortest; of obliques drawn from the given point those which cut the plane at equal distance from the foot of the perpendicular are equal.

Straight lines in space which are parallel to a given straight line are parallel to one another.

The projection of a straight line on a plane is itself a straight line.

If a straight line outside a given plane is parallel to any straight line drawn on the plane, it is also parallel to the plane itself.

If a straight line is perpendicular to a plane, any plane passing through the perpendicular is also perpendicular to the given plane.

If two intersecting planes are each perpendicular to a third plane, their line of section is also perpendicular to that plane.

In a tri-hedral angle, the sum of any two of the face angles is greater than the third.

In a convex solid angle, the sum of the face angles is less than four right angles.

4. *Elementary Statics and Dynamics.*

(a) Uniform and uniformly accelerated motion, composition and resolution of velocities, accelerations, etc.

Definition of mass, momentum, force.

Newton's laws of motion.

Units of force and measurement.

Composition and resolution of forces acting at a point.

Simple illustrations of Newton's laws; projectiles, motion of a particle on an inclined plane, motion of two particles connected by a string, uniform circular motion.

(*b*) Equilibrium of forces.

Resolution and composition of parallel forces in one plane.
Centre of parallel forces.
Centre of gravity. Mass centre.
Reduction of any system of co-planar forces acting on a rigid body to a single resultant force or couple.
Conditions of equilibrium for co-planar forces.
Friction.
Machines.

(*c*) Impulse of a force.

Conservation of linear momentum for a system of particles.
Simple cases of impact of two spherical bodies moving in the same plane.
Work and energy.
Application of the principle of energy to the solution of simple problems.

Two papers shall be set of three hours each, the first being allotted to Algebra, Plane Trigonometry and Geometry, and the second to Elementary Statics and Dynamics.

In all the subjects only such examples and questions may be introduced by way of illustration or explanation as arise directly out of the propositions themselves.

PHYSICS.

Theoretical.

The course in Physics shall be mainly experimental. Candidates will be expected to show general acquaintance with the apparatus by which elementary principles of Physics are illustrated and applied.

General Ideas—

Units of measurement—Length, Mass, Time-Motion, Velocity, Acceleration, Momentum, Force. Moment of a force and couple. Work and Energy.
Laws of Motion.
Translatory motion, circular motion, and simple harmonic motion.
Laws of pendulum.
General properties of solids, liquids and gases. Specific gravity.
Elasticity—Hook's Law. Young's modulus. Hydrostatic pressure and its measurement. Equilibrium of floating bodies.

Dalton's Law. Boyle's Law.
Syphon. Lift Pump. Hydraulic Press.
Barometer.
Air Pump.

Heat—

Expansion of solids, liquids and gases by heat.
Temperature and its measurement.
Quantity of Heat. Specific Heat. Changes of molecular state.
Melting point. Boiling point. Latent heat.
Vapour pressure.
Formation of cloud, fog and dew.
Simple ideas on Hygrometry.
Radiation, Conduction and Convection of heat.
Heat and work. Conservation of Energy.
Working of steam engine and simple petrol engine.

Light—

Propagation of light and elementary wave theory.
Velocity of light—Romar's method.
Formation of shadows, Photometry.
Reflection of light at plane and spherical surfaces and the formation of images.
Refraction of light across plane and spherical boundaries.
Formation of images by single lens.
Power of a lens.
Eye vision, colour and colour sensation.
Spectacles.
Astronomical and Galilean Telescopes.
Binoculars, Compound Microscopes.
Magic Lantern, Cinematograph and Photographic Camera.
Prism, minimum deviation, chromatic dispersion, typical spectra and spectroscope.
Phosphorescence and Fluorescence.

Sound—

Production and propagation of sound.
Nature of wave motion. Wave front. Wave length.
Frequency, amplitude and phase.
Velocity of sound in air. Experimental determination.
Effect of Pressure and Temperature on Velocity.
Reflection and refraction of sound waves.
Musical sound and noise—human ear.
Pitch, and Quality of Tones.
Determination of pitch.
Tuning forks.

Vibration of Strings—Sonometer.
Beats.
Vibration of air column. Organ Pipe.
Phonograph.

Electricity and Magnetism—

(1) Magnetism—

Properties of Magnets.
Methods of Magnetisation.
Magnetic pole, Lines of Force. Magnetic field. Laws of Magnetic force. Magnetic Intensity and Magnetic Induction. Magnetic Moment.
The Earth as a Magnet:—Declination, Dip and Intensity.
Mariner's Compass.

(2) Frictional Electricity:—

Nature of electricity. Electron. Electric charge.
Electrical attraction and repulsion. Lines of force.
Properties of conductors and insulators.
Electrical induction. Simple Electroscope.
The Laws of electric force.
Electric field; Strength of field.
Potential.
Distribution of charge on conductors.
Capacity.
Simple condensers, Leyden jars
Specific Inductive Capacity.
Electrophorus, Influence Machines.
Electric discharge.

(3) Dynamical Electricity:—

Voltaic cells. Electric current.
Magnetic effect of current.
Simple Galvanometers—Suspended needle and suspended coil types.
Primary and Secondary batteries.
Electromotive force; difference of potential.
Ohm's law—Resistance.
Wheatstone's bridge.
Laws of Parallel and Series resistance.
Voltmeters and Ammeters.
Heating effects of current. Joule's Law.
Laws of Electrolysis.
Action of magnets on currents and currents on magnets.
Barlow's wheel.
Solenoids, Electromagnet and Electric Bells.

Electromagnetic induction. Faraday's Laws Lenz's Law.
Electric Telegraphy. Telephone and Microphone.
Induction coil.
Thermo-electric couple.
Simple phenomena of discharge in gases.

Practical.

Length measurement of millimetre rule. Eye-estimation of tenths of a division.

Use of—Spirit level and plumb line

Verniers—linear and angular
Callipers.
Screw gauges
Spherometer.

Measurement of areas by plotting on squared paper.
Measurement of angles by protractors.
Verification of the laws of friction.

Time of swing of a simple pendulum. Verification of the formula T^2 varies as l.

Use of Balance weighing to one centigramme.

Determination of specific gravities of solids and liquids by the hydrostatic balance and Nicholson's hydrometer.

Determination of specific gravity of a liquid by Hare's apparatus.

Reading the Barometric height.

Verification of Boyle's Law

Determination of fixed points of thermometers

Simple methods of determining specific heat; Latent heat of fusion of ice.

Verification of the laws of reflection and refraction by pin method.

Measurement of angle of deviation through a prism by pin method.

Use of simple photometers.

Refractive index of glass slab by the pin method.

Focal length of concave mirrors and convex lenses

Determination of the poles of a bar magnet.

Magnetisation on iron rod and the study of distribution of magnetism along it with iron filing.

Tracing the lines of force in the neighbourhood of a magnet.

Setting up Daniell, Bunsen and Leclanche cells.

Use of simple galvanometers.

Measurement of resistance by a simple form of Wheatstone's Bridge. Verification of Ohm's Law.

CHEMISTRY

THEORETICAL COURSE

States of aggregation of matter, effect of pressure and temperature on volumes of gases, changes of state, saturation pressure, indestructibility of matter and of energy, chemical and physical changes, enumeration of changes attending chemical reaction, elements and compounds, balance, weights and measures, common laboratory processes—mixture, solution, crystallisation, distillation, evaporation, precipitation, filtration, decantation, desiccation, combination by weight and volume, atoms and molecules, Avogadro's law, simple examples of determination of atomic weights, laws of chemical combination, the atom and atomic theory, general principles of periodic classification, terminology and nomenclature, symbols, formulæ, equations, decomposition, dissociation, combustion, oxidation, reduction, calculation of formulæ from percentage composition calculations relating to weight and volume, Faraday's laws of electrolysis, electrochemical equivalents, valency, acids, bases and salts, neutralisation.

Study of the following·—Hydrogen, oxygen, catalytic agent, ozone, allotropic modifications of elements, water, hydrogen peroxide, nitrogen, air, ammonia, oxides of nitrogen, nitric acid, sulphur, polymorphs of elements, sulphuretted hydrogen, sulphur dioxide, sulphur trioxide, sulphuric acid, carbon, carbon monoxide, carbon dioxide, coal and its chief products, coal gas, marsh gas, ethylene, acetylene structure of flame, flourine hydrofluoric acid, chlorine, hydrochloric acid, hypochlorous acid, bleaching powder, chlorates of potassium and calcium, bromine, hydrobromic acid, iodine, hydriodic acid, phosphorus, phosphoretted hydrogen, phosphorus trioxide, phosphorus pentoxide, orthophosphoric acid and orthophosphate, silicon, silica, dialysis, composition of glass, borax, sodium, potassium, calcium, magnesium, zinc, mercury, copper, silver, aluminium, lead, tin, iron —omitting metallurgical details—and their oxides, hydroxides, chlorides, nitrates, sulphates and carbonates.

Practical Course.

Fitting up of simple apparatus, *e.g*, a wash-bottle

Performance of experiments involving solution, filtration, distillation and crystallisation

Determination of the water of crystallisation of hydrated salts,

Preparation and study of the principal properties of hydrogen and oxygen.

Performance of experiments illustrating the chemistry of fire, air and water.

Performance of experiments involving oxidation and reduction. Simple blow-pipe analysis.

Determination of the equivalent of zinc and hydrogen.

Preparation and study of the principal properties of sulphur dioxide, nitric acid, nitric oxide, ammonia, carbon dioxide, hydrochloric acid, chlorine and sulphuretted hydrogen.

Qualitative analysis of simple substances containing not more than one acid and one basic radical included in the following list:—ammonium, sodium, potassium, calcium, magnesium, zinc, mercury, copper, silver, aluminium, lead, tin, iron, and their oxides and hydroxides, chlorides, nitrates, sulphides, sulphates and carbonates.

Use of the chemical balance.

BOTANY.

(*a*) Elementary General Morphology, including a study of the outline of the life-history of selected plants to illustrate the gradual ascent in complexity of structure and reproductive cycle from the lowest fungi and algæ to the phanerogams.

(*b*) The principles of classifications as illustrated by common plants; outlines of any one of the modern systems of classification. Referring plants to their natural orders.

(*c*) Elementary Histology—Structure and formation of cells Union of cells into tissues; principal types of tissue; tissue systems. Structure and development of roots, leaves, and floral organs. Glands and glandular organs. Microchemical reaction of cellulose and its modifications, of starch, and of protoplasm.

(*d*) Elementary Plant Physiology, illustrated by simple experiments—Absorption of water: movement of water and gases within the plant; chemistry of the plant-body; food materials of plants, their sources and form; photo-synthesis: digestion, assimiliation, transpiration; nutrition, metabolism; reserve materials. Growth; influence of external conditions on growth. Irritability. Reproduction, sexual and asexual.

Practical Course.

Use of simple compound microscope. Dissection of flowers involving the use of a pocket lens, and needle and a pen-knife. Referring plants to the Natural Orders mentioned in the theoretical syllabus. Microscopic examination of chief plant tissues under simple conditions. Water-culture experiments; experiments on the functions of chlorophyll, its formation and decomposition; experiments on the relation between starch formation and external conditions. Experiments on root-pressure,

on the flow of sap from injured parts, on the influence of external conditions on transpiration, on the mobility of water in wood, and on the absorption of mineral substances by the root. Simple experiments on respiration. Movements of growth. Germination experiments.

The course shall include the drawing of parts of plants and of sections.

PHYSIOLOGY.

General view of the Anatomy of the animal body:—

The human skeleton. The skull. The spine. The thorax. Shoulder girdle. The arm. The pelvic girdle. The leg. Joints, Ligaments and tendons.

The relations of the internal organs contained in the cranial, thoracic and abdominal cavities, and detailed knowledge of the structure of one limb, considered as a mechanical appliance.

Histology of the following structures:—

Red and white blood-corpuscles; epithelium (squamous, ciliated and columnar); connective tissues including cartilage (hyaline, white-fibre and yellow elastic), bone, fibrous tissue; muscle; medullated nerve fibre and liver.

Chemical composition of the body. Proteid. Fat. Carbohydrate. Mineral salts.

Elementary Chemistry of blood, lymph and urine.

Chemical composition of food; the quantities and kinds of food required to balance the losses of the system.

The Phenomena of muscular contraction.

Circulation of the blood. The structure of the heart. The auricles and ventricles. The valves. The arteries and veins.

The beat of the heart. The heart-sounds. The flow of blood. The Pulse. The proof of circulation.

Respiration.—The structure of the lungs. The exchange of gases between blood and air, and blood and tissues. The cavity of the chest. The diaphragm. The mechanism of respiration.

The processes of digestion and absorption:—The teeth. The salivary glands. Saliva. The stomach. Gastric juice. Chyme. Pancreatic juice and bile. Vilus. The mesenteric vessels and portal vein. The lacteals and chyle.

Excretion.—The structure of the kidneys. The secretion of urine. The skin and sweat glands.

Production and regulation of animal heat.

General view of the Physiology of the brain and the spinal cord:—The structure of the brain. The cranial nerves. The spinal cord. Anterior and posterior roots. Excitability of a nerve. Reflex action.

Physiology of the organs of sense, and also of the organs of voice and speech:—Taste. Smell. Touch. The muscular sense. The structure of the Eye. The sense of sight. The ear and the sense of hearing. The mechanism of the larynx. The voice and speech.

Practical Course.

I. A general acquaintance with the following Physiological instruments:—

Simple Myograph. Hæmoglobinometer. Hæmocytometer. Ice-freezing Microtome.

II. Preparation and examination under the microscope of the following structures:—

Blood-corpuscles (mammalian and non-mammalian).
Epithelium (squamous, columnar and ciliated).
Striped muscle fibres, medullated nerve fibres.
Hyaline cartilage and bone.
The liver.

III. Practical acquaintance with the chemical Physiology of Egg-albumen. Egg-globulin, Starch, Maltose and Milk.

ZOOLOGY.

The general Morphology and Physiology of the cell and of the simple tissues; cell division.

The general characters of the Protozoa. The shells of Foraminifera and of Radiolaria. The structure and life-history of the Infusoria.

The general characters of the Cœlenterata. The structure and life-history of a Hydra.

The general characters of the Echinodermata. The structure and life-history of Starfish.

The structure and life-history of a Leech.

The general characters of the Annelida. The structure and mode of life of an Earth-worm.

The general characters of the Arthropoda, and of their leading sub-divisions. The structure and life-history of a Crayfish and a Cockroach.

The general characters of the Mollusca and of their leading sub-divisions. The structure and life-history of a fresh-water Mussel and a Snail.

The structure and mode of life of Amphioxus.

The structure of an Elasmobranch Fish, more specially the skeleton and the circulatory system.

The structure of the Bekti.

The structure and life-history of a Frog.

The structure and life-history of a Pigeon, more specially the skeleton.

The general characters of the Mammalia.

The structure of a Rabbit, more specially the skeleton and the digestive and circulatory systems.

Practical Course.

I. The use of the compound microscope. A general acquaintance with the histology of the cell and the elementary tissues of the animal body.

II. Dissection of the circulatory, respiratory and alimentary systems of the Earth-worm, the Crayfish, the Frog, the Pigeon and the Rabbit; and also a practical study of the general anatomy of the nervous system of these types.

GEOLOGY.

The objects of Geology and the distinctions between Dynamical, Structural and Stratigraphical Geology, Petrology, Mineralogy and Palæontology.

The general relations of the lithosphere, hydrosphere and atmosphere. The distinction between crust and nucleus. Evidences of internal heat.

General physical characters of the continental plateaux and oceanic depressions. Physical characters of the continents, the chief mountain ranges and river systems.

Composition of the Earth's crust. Definition of a mineral. Methods of examining minerals for physical and chemical characters; specific gravity; hardness; fracture; colour; translucency. Characters of crystals; lustre; geometrical relations of the systems of the crystals and their grades of symmetry; chemical and crystallographic isomorphism, pseudomorphism; twinning. The principal physical properties and chemical compositions of the following minerals:—Native gold, silver, coper, mercury, platinum, arsenic, antimony, bismuth and sulphur; diamond, graphite; halite, fluor-spar, galena, blende, cinnabar; pyrite, chalcopyrite, orpiment; corundum, hæmatite cassiterite; rutile, quartz, chalcedony, opal, spinel, magnetite, chromite, borax; calcite, dolomite, magnesite, siderite, malachite; olivine, the pyroxene and amphibole group, talc, topaz, tourmaline, kaolin, the felspars, micas, garnets, zircon; nitre; apatite; barytes, anhydrite, gypsum, alungen, alum, melanterite.

Definition of a rock. Distinction between igneous, aqueous and metamorphic rocks. Classification of igneous rock, (*a*) according to origin, (*b*) according to chemical composition. General differences between the structural characters of plutonic

and volcanic rocks. Characters of dyke-rocks. Nature of the chief structures of rocks; granitic, granulitic, prophyritic, poikilitic, diabasic, miarolitic, felsitic, vitreous. Description of granites, syenites, diorites, gabbros, peridotites, felsites, rhyolites, trachytes, andesites, dolerites, basalts, obsidian, pumice, tachylyte, volcanic tuffs and ashes. Classification of aqueous rocks and description of the characters and modes of occurrence of the following·—shale, sandstone, conglomerate, ooze, chalk, limestone, peat, lignite, coal, tufas or travertine, oolite, flint and chert sinter, laterite.

Metamorphic rock:—gneisses, schists, slates, marbles, quartzites.

Composition of the atmosphere. Chemical and mechanical action of atmospheric agents on rocks. The formation of soils and laterite. The geological action of underground water; the formation of caverns, and stalactites; origin of springs. The nature and work of glaciers. The destructive and reproductive work of rivers; canons, deltas; river terraces. Origin of landslips. The formation and destruction of freshwater lakes. The origin and nature of salt-lakes.

Composition of the ocean. Nature of the principal marine deposits and the conditions under which they are formed. The formation of coral-reefs. Raised beaches.

Volcanic phenomena and products; distribution of volcanoes, geysers. Earthquakes; definition of seismic focus, epicentre; isoseismal lines. Secular upheaval and depression.

Origin of stratification; the consolidation of strata. The preservation of surface marking on strata. False bedding. Disturbance of horizontality by earth-movements; dip, strike and outcrop; various forms of folds; aniticlinal and synclinal folds. Normal and reserved faults; hade, throw; thrustplanes. Unconformity. Cleavage of rocks. Joints Modes of occurrence of igneous rocks; bosses, dykes, contemporaneous lava-flow, intrusive sheets, volcanic ash-beds, volcanic necks.

Conditions under which organic remains are preserved. Definition of a fossil. The value of fossils in forming a chronological classification of strata. The equivalence of isolated systems of strata. The subdivisions of geological time. The chief features of the Archæan group. The leading palæontological differences between the Palæozoic, Mesozoic and Cainozoic groups. The order of stratigraphical systems in the European standard, stratigraphical scale. The division of post-Archæan strata in India into Purana, Dravidian and Aryan groups. Description of the following systems and series; Dharwar, Bijawar, Cuddapah, Kurnool, Vindhyan; the Cambrian, Products Limestone, and Triassic formations of the Salt Range; the Chief occurrences of marine Jurassic strata; the Gondwanas; the Cretaceous formation of South India; the Lower Tertiary

formations; the Siwalik series. The Indo-Gangetic alluvial deposits.

Practical Course.

Determination of the hardness and specific gravity of a mineral specimen. The recognition of hand specimens of the minerals and rocks mentioned in the syllabus. The use of the contact goniometer. The determination of dip and strike. The drawing of sections from geological maps. The recognition of specimens illustrating the following classes and orders of fossils:—Foraminifera, Radiolaria, Sponges, Corals, Graptolites, Echinoderms, Bryozoa, Brachiopoda, Pelecypoda, Gasteropoda, Cephalopoda, Trilobites.

GEOGRAPHY.

The regional geography of the World, with a more detailed treatment of India, Southern and South Eastern Asia and Japan, Britain and the countries of Western Europe, and the United States of America.

In addition to the Matriculation Course the following:—

The movements of the Earth and their consequences. The commoner methods of map projection. Methods of representing relief. Contour lines and sections.

The general circulation of the atmosphere; disturbing factors, form and elevation of the land surface, and the unequal heating of sea and land. Distribution of rainfall and aridity, of permanent, seasonal and variable winds, of land and sea climate. Cyclonic and anticyclonic movements of the air and their relation to humidity and rainfall.

The general relief of the ocean floor, and the deposits upon it. Ocean currents in relation to climate and commerce. The causes of the tides, and their effect upon the situation and commercial importance of ports.

Land forms: their classification and origin. Crustal movement. Volcanic action. Weathering and erosion. Results of glacial action. The work of rivers.

The general distribution of Flora and Fauna, with special reference to environment and uses: climatic zones.

The general distribution of minerals, and their accompanying or dependent industries.

Man and his markets, with special reference to the British Empire.

The distribution of the human race; formation and expansion of Nationalities.

The treatment of the regions named for special attention shall have reference to the characteristic, physical and climatic

features, natural resources, industries, trade, distribution of population, the principal towns and internal lines of communication, the people in regard to race, language and national development.

A more advanced knowledge of general principles shall be required than in the Matriculation Examination.

Practical Course.

Elementary Cartography. Drawing Plans and Maps, including examples from the student's immediate surroundings. Drawing statistical diagrams on squared paper. Modelling in sand and clay. Mercator's Projection. Orientation and elementary determination of latitude. Simple meteorological observations; temperature, pressure, humidity (wet and dry bulb thermometers). Wind direction, clouds and rainfall. Study of Meteorological Charts.

BIOLOGY.

(1) Characteristics of the living matter. Difference between living and non-living. Difference between animal and plant.

(2) The physical and chemical nature of protoplasm (treated in an elementary manner). Cells, animal and vegetable, their structures and functions. Cell division. Tissues and tissue-systems in animals and plants.

(3) Nutrition and growth, circulation of nutritive materials, respiration, excretion, secretion and the storage of reserve material in animals and plants. Photosynthesis in plants.

(4) Stimulus and response in plants and animals. Movements in plants and animals Nervous mechanism in animals.

(5) Chemical co-ordination.

(6) Reproduction, asexual and sexual. Parthenogenesis. Alternation of generation. The formation of the embryo in the fowl.

(7) Outlines of the theory of organic evolution.

(8) Elementary study of the following types:—

Amœba—Monocystis—Hydra—Leech—the freshwater prawn (Palæmon)—Bhekti—Toad—Guinea pig.

Yeast—Mucor—Spirogyra—Moss—Fern—Pea plant—Maize plant.

Practical Course.

Candidates shall be required to dissect and examine microscopically the above types. They must be prepared to examine and describe the parts of various flowering plants in simple technical terms.

GENERAL.

1. In order to pass the Intermediate Examination in Science a candidate must obtain—

In English	108	marks
In the Vernacular or the alternative paper ...	36	,,
In each of the remaining compulsory subjects taken up	60	,,
And in the aggregate of the compulsory subjects	340	,,

2. In order to be placed in the first division a candidate must obtain 500 marks.

In order to be placed in the second division 400 marks.

If a candidate has passed in the compulsory subjects and in the aggregate, the marks in excess of 60 obtained by him in the optional subject, if any, shall be added to his aggregate, and the aggregate so obtained shall determine his division and his place in the list.

3. Any candidate who has failed in one subject only, and by not more than 5 per cent. of the full marks in that subject, and has shown merit by gaining 50 per cent. or more in the aggregate of the marks of the examination, shall be allowed to pass.

4. If the Moderators are of opinion that in the case of any candidate not covered by the preceding Regulation, consideration ought to be allowed by reason of his high proficiency in a particular subject, or in the aggregate, they shall report the case to the Syndicate, and the Syndicate may pass such candidate.

5. Candidates who after passing the Intermediate Examination in Arts, appear for the Intermediate Examination in Science, shall be required, in order to pass, to obtain 36 per cent. in each subject for which they present themselves in the latter examination.

CHAPTER XXXVI.

BACHELOR OF SCIENCE.

1. An examination for the Degree of Bachelor of Science shall be held annually in Calcutta, and such other places as shall from time to time be appointed by the Syndicate, and shall commence at such time as the Syndicate shall determine, the approximate date to be notified in the Calendar.

2. Any undergraduate of the University may be admitted to the examination, provided he has prosecuted a regular course of study, for not less than two academical years after passing the Intermediate Examination in Science, in one or more Colleges affiliated to the University in the subjects which the candidate takes up.

3. Every candidate sent up for the B.Sc. Examination by an affiliated College shall produce a certificate (*a*) of good conduct, (*b*) of diligent study, (*c*) of having satisfactorily passed the College periodical examinations and other tests, and (*d*) of probability of passing the examination. Every candidate shall send in his application with a certificate in the form prescribed by the Syndicate to the Registrar at least six weeks before the date fixed for the commencement of the examination. If he desires to be examined for Honours in any subject he shall name the subject in his application. If a candidate offers Experimental Psychology he shall be required to give the Registrar notice of the fact twelve months before the date of the examination.

4. A fee of Rs. 45 shall be forwarded by each candidate with his application, provided that a candidate who applies for admission to the Honours Examination shall pay an additional fee of Rs. 10.

A candidate who fails to pass or to present himself for examination, shall not be entitled to claim a refund of the fee. A candidate who fails to pass may be admitted to one or more subsequent examinations for the Degree of Bachelor of Science on payment of a like fee of Rs. 45 or 55 as the case may be on each occasion, provided he produces a certificate from the Head of an affiliated College, shewing that he has prosecuted a regular course of study for one academical year since the date of the last examination, in each of the subjects in which he is to be examined.

5. The examination for the Degree of Bachelor of Science shall be conducted by means of printed papers, the same papers being used at every place at which the examination is held.

6. Every candidate shall be examined in three of the following subjects selected by himself:—

(I) Mathematics.
(II) Physics.
(III) Chemistry.
(IV) Botany.
(V) Geology.
(VI) Zoology.
(VII) Physiology.
(VIII) Experimental Psychology.
(IX) Anthropology.

7. No student shall be permitted to take Mathematics for the B.Sc. Examination unless he has taken it up for his Intermediate Examination.

No student shall be permitted to take up Physics or Chemistry for the B.Sc. Examination unless he has taken up both Mathematics and Physics for the Intermediate Examination.

8. A candidate may take up the Pass Course in three subjects, or the Pass Course in two subjects and the Honours Course in one subject. In the Pass Course, in any subject except Mathematics, there shall be two theoretical papers and one paper in practical work. In the Honours Examination in any subject except Mathematics there shall be four theoretical and two practical papers. In Pass Mathematics, there shall be three theoretical papers. In Honours Mathematics, there shall be six theoretical papers.

9. As soon as possible after the examination, the Syndicate shall publish a list of the candidates who have passed in the Pass Course, arranged in alphabetical order together with a list of those who have obtained Honours in each branch, arranged in two classes, both in order of merit. Each successful candidate shall receive with his Degree of B.Sc. a certificate in the form entered in Appendix A.

10. The limits of the above subjects for both theoretical and practical work are defined below.

MATHEMATICS.

The papers in Mathematics shall be distributed as follows:—

PASS COURSE.

Paper I.

1. *Higher Plane Trigonometry.*

Submultiple angles.
Properties of triangles.
General values of angles which have the same sine, cosine, etc.
Inverse circular functions.
Summation of series.
De Moivre's theorem.
Exponential values of sine and cosine.
Expansion of sin θ and cos θ in powers of θ.

2. *Plane Analytical Geometry.*

Co-ordinates, cartesian and polar.

Transformation of co-ordinates; changes of axes.
The straight line; equations representing a pair of straight lines.
The circle.
The parabola.
The ellipse.
The hyperbola.

Paper II.

3. *Differential Calculus.*

Variables and constants.
Functions; the graph of a function.
Limits; differentiation, Infinitesimals, differentials, successive differentiation, Taylor's and Maclaurin's theorems.
Maxima and minima.
Differentiation of a function of several variables; partial differentiation.
Simple geometrical and physical applications.

4. *Integral Calculus and Differential Equations.*

Integration, summation.
Elementary integrals.
Integration by parts.
Partial fractions.
Integration of irrational and trigonometrical functions.
Differential equations of the first order involving two variables.
Linear equations with constant co-efficients.
Simple geometrical and physical applications.

Paper III.

5. *Hydrostatics.*

Nature and properties of fluid pressures.
Density and specific gravity of a homogeneous mixture.
Determination of the pressure of a heavy liquid in simple cases.
Centre of pressure.
Conditions of equilibrium and stability of equilibrium for a floating body.
Properties of elastic fluids and determination of pressure.
Measurement of heights by the barometer.
Determination of specific gravities.
Mixture of gases.

Descriptions of the barometer, air-pump, common and force pumps, the diving bell, the baloon, siphon, and Brahmah's press as applications of hydrostatical principles.

6. *Astronomy.*

The subject is to be treated mathematically but without the use of spherical trigonometry.
The Earth.
Transit instrument, meridian circle, equatorial and micrometer.
Atmospheric refraction.
The sun and the solar system.
Parallax.
Determination of the first point of Aries.
Precession, nutation, aberration.
The moon.
Lunar and solar eclipses.
Measurement of time.
Determination of latitude and longitude by simple methods.
The fixed stars.

HONOURS COURSE.

Paper I.

1. *Higher Algebra.*

Binomial theorem.
Convergence and divergence of series.
Inequalities.
Simple continued fractions.
Summation of series.
Determinants.

2. *Elementary Theory of Equations.*

General Properties of equations.
Relation between roots and co-efficients of equations.
Transformation of equations.
Algebraic solution of cubic and biquadratic equations.
Limits of the roots of equations.
Solution of numerical equations.

Paper II.

3. *Higher Plane Trigonometry.*

In addition to a fuller treatment of the Pass Course, the following:—

Expansion of $\sin {}^{n}\theta$, $\cos {}^{n}\theta$ $\sin n\theta$, $\cos n\theta$, Hyperbolic functions.

Expansion of series.
Resolution of circular and hyperbolic function into factors.

4. Plane Analytical Geometry.

In addition to a fuller treatment of the Pass Course, the general equation of the second degree in Cartesian co-ordinates.

Paper III.

5. Elementary Solid Geometry.

Cartesian and polar co-ordinates.
The straight line and plane.
The sphere.
The cone and cylinder.
The ellipsoid.
The hyperboloids.
The paraboloids.
Generating lines and sections of quadrics, conjugate diameters.
Diametral planes and principal planes.
Curvature of surfaces. Meunier's theorem.

6. Elementary Principles of Vectors.

Fundamental notions.
Addition, subtraction, multiplication and division of vectors.
Simple physical applications.

Paper IV.

7. Differential Calculus.

In addition to a fuller treatment of the Pass Course, an increased number of geometrical, physical and analytical applications.

8. Integral Calculus and Differential Equations.

In addition to a fuller treatment of the Pass Course:—

Formulæ of reduction.
Simple cases of definite integrals.
Graphical methods.
Fourier's series.
Differential equations of the first and second orders involving two variables only.

Paper V.

9. Statics.

Composition and Resolution of forces.

General conditions of equilibrium of a particle under the action of co-planar forces.
Equilibrium of a particle on plane curves.
Composition and resolution of co-planar forces acting on a rigid body.
Principle of virtual work.
Simple machines.
Friction.
Centroids and centres of mass.
Simple cases of equilibrium of flexible inextensible strings.

10. Dynamics of a particle.

Velocity, acceleration.
Laws of motion.
Rectilinear, parabolic, circular, and harmonic motion.
Impact.
Work and energy.
Central orbits.

Paper VI.

11. Hydrostatics.

The subjects of the Pass Course treated more fully.

12. Astronomy.

The subjects of the Pass Course treated more fully.

PHYSICS.

(Pass Course.)

THEORETICAL.

The subjects are to be treated mathematically as well as experimentally as far as the Mathematics of the Intermediate course are applicable.

In addition to a fuller treatment of the parts of the subject prescribed for the Intermediate Examination in Science the following:—

General Ideas.

1. Wave motion.

Simple harmonic motion—Combination of S. H. Motions.
Graphical composition of simple harmonic motions.

2. Potential.

Definition of Potential.
Calculation of Potential in simple cases.

3. General Properties of Matter.

Gravitation and Gravitation constant.
Moment of Inertia for simple cases.
Deformation of Solids.
Elasticity, Young's modulus, Poisson's ratio. Simple rigidity—treated experimentally.
Friction.
Experimental study of—

Surface Tension and Capillarity.
Viscosity.
Diffusion and Osmosis.
Rotary Pumps.

4. Units and Dimensions.

Heat.

Measurement of high and low temperatures.
Calorimetry and change of state.
Bulong and Petit's Law.
Vapour Density and Vapour Pressure.
Critical state, Andrew's and Amagat's experiments.
Conductivity of solids. Diffusivity,—Measurement.
First laws of Thermodynamics.
Determination of J.
Conversion of heat into work.
Isothermal and adiabatic changes.
Specific heats under various conditions.
Heat engines.
Liquefactions of gases.
Nature of Radiation.
Elementary ideas on Kinetic Theory of Gases.

Light.

Velocity of Light—Fizeau's and Foucault's methods.
Explanation of Reflection and Refraction from Huyghen's principle.
Caustic curves.
Magnification of Microscopes and Telescopes.
Sextant, Prism Binocular, Stereoscope and Periscope.
Dispersive power.
Achromatic combinations.
Direct-vision spectroscope.

Spectrometer.
Infra-red, visible and ultra-violet spectra.
Rain-bow (primary).
Significance of the spectra of celestial bodies.
Doppler effect.
Simple cases of Interference and Diffraction.
Diffraction grating.
Polarisation.
Double refraction.
Nicol's prism.

Sound.

Velocity of sound in air with Laplace's correction.
Deppler's principle.
Simple cases of interference of sound; Beats.
Stationary waves. Forced and free vibrations. Resonance.
Diatonic scale. Temperament.
Quality of sound; Combinational tones.
Human voice.

Electricity and Magnetism.

(*a*) Magnetism—

Determination of declination, dip and intensity of the Earth's magnetic field.

Magnetic potential.

Magnetic properties of iron and steel. Susceptibility and Permeability.

Hysteresis.

Paramagnetism, Ferremagnetism, and diamagnetism.

(*b*) Frictional Electricity—

Field of force.
Gauss's Theorem.
Electrostatic energy.
Electric condensers of simple geometric form.
Specific inductive capacity and its measurement in case of solids.
Electrometers.
Electrostatic units.

(*c*) Dynamical Electricity.

Kirchoff's laws.
Mechanical interaction of currents and magnets.
Measurement of Electromotive force. Conductivity and resistance and current.
Electromagnetic units.
Effect of temperature on electric resistance.
Platinum thermometer,

Effect of light and magnetic field on resistance—Selenium cell.

Theory of secondary cells.

Joule's Law—Electrical Energy—Power, efficiency.

Town and house supply of electrical energy—commercial meters.

Thermoelectricity including Peltir and Thomson effects.

Thermogalvanometers and Electric Pyrometers.

Laws of electromagnetic induction: Co-efficients of self and mutual induction.

Earth Inductor: Simple alternating currents and general principles of transformers.

Simple Dynamos and Motors.

Elementary knowledge of—

(1) Electric oscillations and Electric waves.
(2) Measurement of charge and mass of electron.
(3) Thermionic tubes.

Production and Nature of X-rays.

α-rays, β-rays, and γ-rays.

PRACTICAL.

Use of the balance.

Reading and correcting Barometer.

Determination of specific gravities.

Determination of the modulus of elasticity of a given wire by stretching.

Determination of the intensity of gravity by the pendulum.

Measurement of the co-efficient of linear expansion of metals.

Measurement of the co-efficient of apparent expansion of a liquid.

Measurement of the co-efficient of expansion of air at constant pressure.

Measurement of the co-efficient of increase of pressure of a gas at constant volume.

Determination of the specific heat of solids and liquids with radiation correction.

Determination of the hygrometric state.

Determination of the velocity of sound by resonance columns.

Use of the Sonometer.

Determination of focal lengths of Lenses and Mirrors.

Verification of the formula for focal length of combination of lenses.

Determination of the magnifying power of the combination of lenses.

Refractive index of a liquid by Microscope.

Adjustment and use of Spectroscope.

Spectrometer—determination of the refractive index of the substance of the prism.

μ by total reflection.

Comparison of magnetic moments.

Determination of horizontal intensity of Earth's magnetism.

Use of Voltmeters and Ammeters. Millivoltmeters and Milliammeters.

Constant of a Tangent Galvanometer by copper voltameter.

Figure of merit of a Galvanometer.

Measurement of the resistance of wires.

Comparison of electromotive forces.

Measurement of Low and High Resistances.

Measurement of Galvanometer resistance.

Laboratory arts such as glass blowing and soldering.

The laboratory note books of candidates shall be inspected and marked by examiners, and if they are found to be unsatisfactory the candidates will be disqualified. Note books which have not been signed at frequent intervals by the Professor under whom the candidates worked, will not be accepted.

THEORETICAL.

(*Honours Course.*)

The subjects for the Pass Course treated fully with the addition of the following, the whole being treated theoretically as well as experimentally :—

General Properties.—

Experimental determination of Gravitational constant.

Theory of Dimensions.

Young's modulus due to bending. Torsional rigidity.

Relation between elastic constants.

Viscosity of liquids and gases—experimental determination.

Production of High Vacuum. McLeof gauge.

Brownian movement.

Heat.—

Equations of state—Theory of corresponding states.

Black body radiation—Stefan and Boltzman's Law.

Empirical Radiation Formulæ.

Radiation Pyrometry.

First and second laws of thermodynamics; Garnot's cycle.

Entropy.

Absolute scale of temperature.

Kinetic theory of gases and simple applications.

Specific Heat at Low temperature.

Light.—

Modern methods of determination of velocity of light.
Thick lens: Field of View.
Compound eye-pieces.
Interference—Newton's rings.
Michelson's interferometer.
Simple cases of Diffraction.
Resolving powers of Prism and Grating.
Anomalous Dispersion.
Polarised Light and its interference—interference pattern in crystals.
Circular and Elliptic polarisation: Rotatory polarisation.
Faraday' Effect Kerr effect.
Spectrum and its teaching; Hydrogen spectrum—Balmer's series.
Normal Zeeman effect.

Sound.—

Absolute determination of frequency of tuning fork.
Stationary waves, forced oscillations.
Energy of sound waves.
Determination of Intensity of Sound.

Electricity and Magnetism.—

(*a*) Magnetic force due to a small magnet.
Energy of a magnetic field.
Magnetic shells.
Magnetic lines of force—Intensity of magnetisation and magnetic induction.
Permeability and susceptibility.
Hysteresis—energy loss.

(*b*) Laplace and Poisson's Equations.
Polarisation in Dielectrics.
Simple cases of electric images.
Theory of Quadrant electrometer.

(*c*) Theory and use of Ballistic galvanometer
Absolute measurement of resistance and current.
Alternating currents and Transformer.
Oscillatory Discharge of a Condenser—Hertz Experiment.
Ratio of Electrostatics to Electromagnetic Units.
Positive Rays: Isotopes.
Ionisation and Saturation current.
C T. R. Wilson's Experiment.
Measurement of wavelengths of X'rays.
Einstein's Photo-electric equation.
Significance of atomic number.

PRACTICAL.

In addition to the Pass Course the following:—

Use of the balance with corrections for displacement of air.

Calibration of tubes.

Determination of Young's modulus of a given rod by bending.

Measurements of surface tension by means of capillary tubes.

Variation of density of water with temperature.

Expansion of water on solidification.

Specific heat of liquids by the method of cooling.

Determination of vapour pressure.

Determination of vapour density.

Clament's and Desorme's method of finding out the ratio of two specific heats.

Conductivity of a bar by Searle's method.

Velocity of sound in rods by Kundt's tube.

Refractive indices of solids and liquids.

Determination of modal points of combination of lenses.

Mapping of Spectra.

Diffraction through a single and double slits.

Measurement of wavelengths by gratings.

Bi-prism.

Measurement of Battery resistance.

Platinum Resistance thermometer.

Measurement of Electrolytic resistance.

Determination of J. by Callendar and Barnes apparatus.

Determination of Thermo. E. M. & F. of a thermo-couple.

Greater proficiency is expected in glass blowing than in the Pass Course.

The Laboratory note books of candidates shall be inspected and marked by Examiners and if they are found to be unsatisfactory the candidates will be disqualified. Note books which have not been signed at frequent intervals by the Professor under whom the candidates worked will not be accepted.

CHEMISTRY.

PASS COURSE.

In addition to a fuller treatment of the subjects prescribed for the I.A. and I.Sc. course, the following:—

Theoretical.

Periodic classification of elements, atomic number, isotopes, kinetic theory of gases, diffusion of gases, liquefaction of gases,

Light.—

Modern methods of determination of velocity of light.
Thick lens: Field of View.
Compound eye-pieces.
Interference—Newton's rings.
Michelson's interferometer.
Simple cases of Diffraction.
Resolving powers of Prism and Grating.
Anomalous Dispersion.
Polarised Light and its interference—interference pattern in crystals.
Circular and Elliptic polarisation: Rotatory polarisation.
Faraday' Effect. Kerr effect.
Spectrum and its teaching; Hydrogen spectrum—Balmer's series.
Normal Zeeman effect.

Sound.—

Absolute determination of frequency of tuning fork.
Stationary waves, forced oscillations.
Energy of sound waves.
Determination of Intensity of Sound.

Electricity and Magnetism.—

(*a*) Magnetic force due to a small magnet.
Energy of a magnetic field.
Magnetic shells.
Magnetic lines of force—Intensity of magnetisation and magnetic induction.
Permeability and susceptibility.
Hysteresis—energy loss.

(*b*) Laplace and Poisson's Equations.
Polarisation in Dielectrics.
Simple cases of electric images.
Theory of Quadrant electrometer.

(*c*) Theory and use of Ballistic galvanometer.
Absolute measurement of resistance and current.
Alternating currents and Transformer.
Oscillatory Discharge of a Condenser—Hertz Experiment.
Ratio of Electrostatics to Electromagnetic Units.
Positive Rays: Isotopes.
Ionisation and Saturation current.
C. T. R. Wilson's Experiment.
Measurement of wavelengths of X'rays.
Einstein's Photo-electric equation.
Significance of atomic number.

PRACTICAL.

In addition to the Pass Course the following:—

Use of the balance with corrections for displacement of air.

Calibration of tubes.

Determination of Young's modulus of a given rod by bending.

Measurements of surface tension by means of capillary tubes.

Variation of density of water with temperature.

Expansion of water on solidification.

Specific heat of liquids by the method of cooling.

Determination of vapour pressure.

Determination of vapour density.

Clament's and Desorme's method of finding out the ratio of two specific heats.

Conductivity of a bar by Searle's method.

Velocity of sound in rods by Kundt's tube.

Refractive indices of solids and liquids.

Determination of modal points of combination of lenses.

Mapping of Spectra.

Diffraction through a single and double slits.

Measurement of wavelengths by gratings.

Bi-prism.

Measurement of Battery resistance.

Platinum Resistance thermometer.

Measurement of Electrolytic resistance.

Determination of J. by Callendar and Barnes apparatus.

Determination of Thermo. E. M. & F. of a thermo-couple.

Greater proficiency is expected in glass blowing than in the Pass Course.

The Laboratory note books of candidates shall be inspected and marked by Examiners and if they are found to be unsatisfactory the candidates will be disqualified. Note books which have not been signed at frequent intervals by the Professor under whom the candidates worked will not be accepted.

CHEMISTRY.

PASS COURSE.

In addition to a fuller treatment of the subjects prescribed for the I.A. and I.Sc. course, the following:—

Theoretical.

Periodic classification of elements, atomic number, isotopes, kinetic theory of gases, diffusion of gases, liquefaction of gases,

laws of mass action, catalysis, osmotic pressure, the theory of solution, colloids, elements of thermo-chemistry, methods of determination of equivalent, atomic and molecular weights, basicity of acids, acidity of bases, allotropy, isomerism, polymerism, compound radicals and homology, velocity of chemical action, chemical equilibrium, theory of electrolytic dissociation.

Preparation of properties of following elements and their chief compounds—Oxygen, hydrogen, nitrogen, argon, fluorine, chlorine, bromine, iodine, sulphur, boron, carbon, silicon, phosphorus, arsenic, lithium, sodium, potassium, ammonium, calcium, strontium, barium, magnesium, zinc, cadmium, mercury, copper, silver, gold aluminium, manganese iron, tin, lead, antimony, bismuth, nickel, cobalt, chromium and the following compounds of carbon:—

Methane, ethane, ethylene, acetylene, their simple derivatives, namely, haloid derivatives, aldehydes, ketones, alcohols, monobasic acids, acid chlorides, acid anydrides, acid amides, nitrites, ethers, esters, primary, secondary and tertiary amines, glycol, lactic acid, oxalic acid, malonic acid and succinic acid, tartaric acid, glycerol, citric acid, fats, soaps and candles; hydrolysis, saponification; dextrose, laevulose, cane sugar, starch, cellulose; cyanogen, hydrocyanic acid, ferro- and ferricyanides; coal tar and its distillation; benzene, toluene, xylene, orientation, monochlorobenzene, mono-nitrobenzene, benzene sulphonic acid, and phenol, aniline, diazotisation, benzyl chloride, benzal chloride, benzotrichloride, benzyl alcohol, benzaldehyde, benzoic acid, benzoyl, chloride salicylic acid.

Practical.

Preparation of salts in the pure state. Qualitative analysis of inorganic mixtures containing not more than two radicals from the following list—Silver, lead, mercury, copper, bismuth, cadmium, tin, arsenic, antimony, iron, manganese, aluminium, chromium, zinc, cobalt, nickel, calcium, strontium, barium, magnesium, potassium, sodium, ammonium and their oxides, hydroxides, chlorides, bromides, iodides, sulphides, sulphites, sulphates, chronates, carbonates, phosphates, nitrates, nitrites, borates, silicates, cyanides and thiocyanates. Alkalimetry, acidimetry, oxidation and reduction methods of volumetric analysis, gravimetric estimation of copper, silver, iron and sulphuric acid, determination of chemical equivalent. Identification of the following organic compounds given singly—

Methyl alcohol, ethyl alcohol, acetone, chloroform, formic, acetic, oxalic and tartaric acids, glycerol, citric acid, urea, dextrose, canesugar starch, benzene, benzoic acid, aniline, phenol salicylic acid.

HONOURS COURSE.

In addition to a fuller treatment of subjects for the Pass Course, the following:—

Inorganic Chemistry (Theoretical).

Influence of solutes on freezing and boiling points of solvents; ionic and hydrate theories of solutions; osmosis and laws of osmotic pressure; dialysis.

Study of the following elements and their principal compounds: Selenium, Tellurium, Lithium, Cæsium, Rubidium, Chromium, Nickel, Cobalt, Platinum, Helium and Radium.

Organic Chemistry (Theoretical).

Azo and diazo-compounds; phenyl hydrazins; dioxybenzene and quinone; salicylic, toluic and phthalic acids; naphthalene and anthracene.

Inorganic Chemistry (Practical).

The mixtures for qualitative analysis may include not more than four salt radicles, positive or negative, from the following list:—Silver, lead, mercury, copper, bismuth, cadmium, tin, arsenic, antimony, iron, manganese, aluminium, chromium, zinc, cobalt, nickel, calcium, strontium, barium, magnesium, potassium, sodium, ammonium, oxides, hydroxides, chlorides, bromides, iodides, sulphides, sulphites, sulphates, chromates, carbonates, phosphates, nitrates, and nitrites.

A more complete knowledge of volumetric and gravimetric analysis.

Organic Chemistry (Practical).

The mixtures for qualitative analysis may include not more than two of the substances from the following list:—Hydrocyanic acid, formic acid, benzoic acid, oxalic acid, acetic acid, tartaric acid, citric acid, salicylic acid, cane sugar, glucose, starch, methyl and ethyl alcohols, glycerine, benzene, aniline, phenol and urea.

Questions may also be set on quantitative estimation of nitrogen, carbon and hydrogen in organic bodies; estimation of molecular weight of organic acids; determination of vapour density by Victor Meyer's method.

The Laboratory note-books of candidates shall be inspected and marked by Examiners, and if they are found to be unsatisfactory, the candidates will be disqualified. Note-books which have not been signed at frequent intervals by the Professor under whom the candidates worked will not be accepted

BOTANY.

Pass Course.

I. General Morphology of—

(*a*) Phanerogams—including a study of the following subjects in detail—Branch systems; phyllotaxis origin of members. General Morphology should be studied with reference to œcological principles.

(*b*) Cryptogams.

II. Histology:—cell-contents and their microchemical reactions. Structure and development of cells and tissues.

III. Physiology, including the following subjects—treated experimentally:—Absorption of water: movement of water and gases within the plant; chemistry of the plant-body; food materials of plants, their sources and form; photosynthesis; digestion, assimilation, transpiration; nutrition, metabolism; reserve-materials. Growth. Movement of protoplasm. Action of gravity, heat, light and electricity. Some facts connected with symbiosis and carnivorous plants. Mechanical movements (hygroscopic movements; dehiscence of fruit; mechanical ejection of seeds). Autonomous movements (nutation, sleep). Movements due to irritability (mechanical, chemical and physical irritants; twinning). Geotropism, Heliotropism, Transport of food-stuffs and of the products of photosynthesis Asexual and sexual propagation of plants.

IV. The study of the life-history of the following:—Yeast. Chroococcus, a Desmid, Mucor, Chara, Spirogyra, Ulothrix, Veucheria, Peronospora, a Moss, Marchantia, a Fern, Lycopodium and Sellaginella, Equisetum, Cycas, a Conifer, a Monocotyledon, and a Dicotyledon.

V. The principles of classification as illustrated by common plants: outlines of the chief modern systems of classification. Identification of plants by analytical tables. Referring plants to their natural orders.

VI. A knowledge of the systematic position, morphological characters, use and cultivation of some of the more important economical plants (rice and other cereals, pulses, vegetables, fruit-trees, sugar-producing plants, tea, the fan-palm, the bamboo, a few important timber trees, indigo, jute, cotton).

PRACTICAL COURSE.

1. The making, staining and description of microscopical sections of plants.
2. Referring commonly occurring plants to their Natural Orders.
3. Identification of plants by analytical tables.
4. Drawings of dissections of flowers and of microscopical sections.
5. Physiological experiments:—

Water-culture experiments; experiments on the functions of chlorophyll, its formation and decomposition; experiments on the relation between starch formation and external conditions. Experiments on root pressure, on the flow of sap from injured parts, on the influence of external conditions of transpiration, on the mobility of water in wood, and on the absorption of mineral substances by the root. Simple experiments on respiration. Movements of growth. Germination experiments.

The Laboratory note-books of candidates shall be inspected and marked by Examiners, and if they are found to be unsatisfactory, the candidates will be disqualified. Note-books which have not been signed at frequent intervals by the Professor under whom the candidates worked will not be accepted.

HONOURS COURSE.

The same as the Pass Course with the following additions:—

(a) A more extensive knowledge of the characterization and classification of tissue-systems from the anatomical-physiological point of view.
(b) Experiments on the food of plants—organic food-stuffs; the mycorrhiza in relation to humus; experiments with penicillium, saccharomyces, parasitic fungi, and nitrogen-bacteria. Experiments on osmosis and plasmolysis. Vriess's Law considered in the light of the modern theory of solutions. Experiments on the metabolic processes in plants. A more detailed account of the sexual propagation of Thallophyta. Archegoniate, and Siphonogamæ with additional examples to those already mentioned in the Intermediate Course. The decay of plants; humus; putrefaction bacteria, Ferments.
(c) Historical Botany. A short sketch of the occurrence of plants in former geological periods. A few of the more important type fossils of the Bengal coal-fields. A concise account of the theory of evolution.
(d) Botanical Œcology treated with special reference to Indian conditions:—Water: characteristic features of hygrophytes, tropophytes, xerophytes, and hydro-

phytes; hygrometric influences on sexual reproduction; dispersal of seeds by water. Heat: Zeropoints of plant-life; Cardinal Points of plant-functions; acclimatization. Light; influence of intensity and quality Air: atmospheric and dissolved oxygen; effects of barometric pressure and of wind. Soil: physical and chemical properties; effects produced by sodium chloride, reh, and calcium carbonate. Animals: cross fertilisation; ornithophilous and entomophilous plants. Relation of ants to plants. Formations: climatic; edaphic; their characteristics.

(*e*) Geographical Botany, with special reference to the tropical zones and Geographical regions of India.

(*f*) Practical course:—

A. Collection and preservation of specimens. Exercises in the dissection and identification of dried plants. Identification of species belonging to the more difficult orders (*e.g.*, Umbelliferæ, Amaranthaceæ, Piperaceæ, Orchidaceæ, Aroidaceæ, Graminaceæ).

B. Microscopical examination and a more detailed practical study of any one of the following groups, their special morphology and mode of propagation:—

I. Algæ: Conjugatæ.

II. Fungi: one of the following—Saprolegnieæ, Peronosporineæ, Mucorineæ, Pezizineæ, Uridinales, Hymenomycetineæ.

III. Pteridophyta: Polypodiaceæ.

IV. Selaginella, Salviniaceæ and Marsiliaceæ.

The Laboratory note-books of candidates shall be inspected and marked by Examiners, and if they are found to be unsatisfactory the candidates will be disqualified. Note-books which have not been signed at frequent intervals by the Professor under whom the candidates worked will not be accepted.

GEOLOGY.

Pass Course.

Besides a more precise and thorough acquaintance with the subjects prescribed for the Intermediate Examination in Science, a knowledge of the following additional questions shall be required:—

The methods for determining the form, size and weight of the Earth.

Precise description of the physical features of India and Burma.

The rate of downward increment of the internal heat of the Earth.

Methods of investigating the optical properties of crystals by light transmitted through thin sections. The construction and use of the Nicol's prism and the dichroiscope; pleochroism interference; effects in polarised light. The relation of internal physical properties to the geometrical forms of crystals. The use of the reflecting goniometer. The 32 grades of crystal symmetry. Crystal axes; systems of indices; law of rationality of indices; Crystal habit; the twinning of crystals. Paramorphism. Description of the following additional minerals: sylvite, copper-glance, argentite, millerite, marcasite, mispickel, realgar stibnite, bismuthite, molybdenite, pyrrhotite, erubescite, tetrahedrite, pyrargyrite, bournonite, cuprite, pericles, brucite, goethite, diaspore, limonite, bauxite, gibbsite, anatase, brookite, pyrolusite, tridymite, braunite, psilomelane, franklinite, chrysoberyl, natron, rhodochrosite, aragonite, witherite, strontianite, cerussite, chondrodite, ilmenite, sphene, serpentine, apophyllite, andalusite, kyanite, sillimanite, leucite, nepheline sodalite, lapislazuli, scapolite, stilbite, chabasite, analcite, natrolite, epidote, axinite, staurolite, chlorite, beryl, cordierite, vivianite, piromorphite, vanadinite, monazite, turquois, torbernite, columbite, thenardite, celestite, anglesite, kieserite, epsomite, goslarite, blödite, crocoite, wulfenite, wolfram, pitchblende.

The microscopic characters of the leading varieties of igneous rocks. Description of the family of nepheline syenite, and their plutonic and volcanic relatives. The origin and nature of meteorites. Nature of the following structures:—granophyric, aphanitic, hyalopilitic, glomeroporphyritic, taxitic, perlitic, mylonitic. The stages in the development of crystalline structure: divitrification. Petrographical provinces. Magmatic differentiation and segregation. Phosphatic deposits. Anthracite. Amber. Petroleum. Asphalt. Bauxite and clay iron-stone. Rock salt. Alkaline deposits.

Artesian wells. Mineral springs. Denudation as a measure of geological time. The geological action of animals and plants.

Causes and phenomena of the different varieties of metamorphism.

Description of the leading lithological characters and distinctive fossils of the groups and systems in the European standard stratigraphical scale compared with the recognised succession in India. A knowledge of the special characters and distribution of the chief series in India. The principles of correlation.

PRACTICAL COURSE.

Besides a more precise and thorough knowledge of the subjects prescribed for the practical course in Geology for the

Intermediate Examination in Science, a knowledge of the following additional questions shall be required:—

The recognition of specimens of the minerals and rocks enumerated in the foregoing syllabus. Drawing and description of crystals. The use of heavy liquids for the separation of minerals according to their specific gravities. The determination of the pleochroism, angle of extinction and character of double refraction in microscopic sections of minerals. The preparation and description of microscopic sections of rocks. The recognition of the following genera of fossils:—

Globigerina, Orbitolites, Texularia, Nummulites, Orbitoides, Zapphrentis, Cyathophyllum, Calceola, Omphyma, Isatræa, Favosites, Syringopora, Halysites, Stromatopora, Dictyonema; Monograptus, Didymograptus; Pentacrinus, Cyathocrinus; Marsupites, Encrinus, Echinus, Sphærites, Cideris, Micraster; Fenestella; Lingula, Crania, Productus, Orthis, Rhynchonella, Stringocephalus, Terebratula, Spirifer; Nucula, Leda, Arca, Glycimeris, Gervillia Inoceramus, Halobia, Monotis, Ostrea, Glyphæa, Exogyra, Unio, Trigonia, Pecten, Lima, Mytilus, Pholadomya, Astarte, Hippurites, Lucina, Cardium, Tellina, Pholas; Dentalium; Patella, Pleurotomaria, Bellerophon, Euomphalus, Turbo, Natica, Turritella melania Cerithium, Cypræa, Pyrula, Murex, Fusus, Voluta, Conus, Tentaculites, Physa, Limnæus, Planorbis, Helix; Orthoceras, Nautilus, Tropites, Ceratites, Arcestes, Phylloceras, Baculites, Scaphites, Belemnites, Agnostus, Trinucleus, Phillipsia, Calymene, Phacops; Estheria, Cypris.

Glosopteris, Neuropteris, Lepidodendron, Voltzia.

The Laboratory note-books of candidates shall be inspected and marked by Examiners, and if they are found to be unsatisfactory the candidates will be disqualified. Note-books which have not been signed at frequent intervals by the Professor under whom the candidates worked will not be accepted

Honours Course.

In addition to a more complete and detailed knowledge of the subjects prescribed for the Pass Course, candidates will be expected to show an acquaintance with the philosophical bearings of geological data, and with the economic aspects of mineral deposits, including the means usually adopted to estimate their quantities and variation in value according to local conditions. They will be expected to recognise leading species of the fossil genera enumerated for the Pass Course, and to assign to them their geological ages.

The Laboratory note-books of candidates shall be inspected and marked by Examiners, and if they are found to be unsatisfactory the candidates will be disqualified. Note-books which have

not been signed at frequent intervals by the Professor under whom the candidates worked will not be accepted.

ZOOLOGY.

Pass Course.

I. General Principles of Biology. The cell in development and inheritance. The evidences bearing on the Hypothesis of Evolution. General Theories of Variation, Heredity, Adaptation and Origin of Species.

II. (*a*) Distinctive characters of the Invertebrate groups and the structure and habits, etc., of Protozoa-Porifera, Cælenterate, Platyhelminths; Nemathelminthes, Echinodermata, Arthropoda and Mollusca.

(*b*) The distinctive characters, etc., of the Chordata groups and the structure and habits, etc., of Adelochorda, Urochorda, Cyclostomata, Pisces, Amphibia, Reptilia, Aves and Mammalia.

III. General knowledge of the Indian orders of mammals.

IV. The outlines of the development of the Frog and the Chick.

V. Principles of Geographical distribution of animals.

VI. General facts of Geological distribution of animals.

The Practical Examination shall include the dissection, microscopical examination and description of the following types:—Amœba, Paramœcium, Hydra, Leech, Cray-fish, Bekti, Frog, Pigeon and Rabbit.

The Laboratory note-books of candidates shall be inspected and marked by Examiners, and if they are found to be unsatisfactory the candidates will be disqualified. Note-books which have not been signed at frequent intervals by the Professor under whom the candidates worked will not be accepted.

Honours Course.

The Pass subjects treated much more fully, and in addition:—

1. The Embryonic development of the Mosquito.
2. The dissection, microscopical examination, and description of the Cockroach, Malaria mosquito and House lizard.

The Laboratory note-books of candidates shall be inspected and marked by Examiners, and if they are found to be unsatisfactory the candidates will be disqualified. Note-books which

have not been signed at frequent intervals by the Professor under whom the candidates worked will not be accepted.

PHYSIOLOGY.

Pass Course.

I. Chemical Physiology.

The ultimate and proximate principles of the animal body.
The Chemistry of albumen and its allies, carbohydrates, fats, and mineral solids found in the body and the food.

II. Histology.

Microscopical appearance of blood, lymph and milk.
Histology and development of the cell.
Segmentation of Ovum and formation of germinal membranes.
Minute structure of the various organs and tissues of the animal body.

III. General Physiology.

Properties and General Physiology of Contractile Tissues.
Functions and General Physiology of Nerve-cells and Nerve fibres.
Nutrition.
The Circulation of the Blood.
Respiration: internal and external.
Process involved in Digestion and Absorption of food.
Principles of Metabolism—anabolic and katabolic. Internal secretion.
Excretion by kidneys, skin, lungs and liver.
Production and regulation of animal heat.
Mechanism of Locomotion, Voice and Speech.
Physiology of the Brain and the Spinal cord and of the Sympathetic nervous system.
Physiology of the Organs of Sense.

Practical Course.

(*a*) The Chemistry of Starch, Glycogen, Sugars, Albumen, Globuline Milk, Blood, Urine and the Digestive Juices and their actions.

(*b*) The more common Histological Methods and the minute Anatomy of the elementary Tissues, Salivary Glands, Œsophagus, Stomach, Small and Large Intestines, Pancreas, Liver, Spleen, Lymphatic Gland, Thymus, Thyroid, Kidney, Lung, Skin, Tongue and Spinal cord.

(c) The most important Physiological Instruments, and the Methods of Physical Investigation of the functions of various organs as embodied in a number of experiments to be specified from time to time.

The Laboratory note-books of candidates shall be inspected and marked by Examiners, and if they are found to be unsatisfactory the candidates will be disqualified. Note-books which have not been signed at frequent intervals by the Professor under whom the candidates worked will not be accepted.

Honours Course.

The Honours Course shall include the same subjects as the Pass Course treated more fully, and the standard of the Examination shall be higher than that of the Pass.

Practical Course.

The same as the Pass Course, with the addition of the following:—

(a) Chemistry of Muscle, Nerve. Hæmoglobin and its derivatives and Pigments of Bile and Urine.
(b) More advanced Histological technique and a detailed knowledge of the minute structure of Cerebrum, Cerebellum, Medulla Oblongata, Pons Varolii, Eye, Ear, Tastebuds, Olfactory Mucous Membrane, Olfactory Bulb, Ovary and Testis.
(c) A number of additional experiments to be specified from time to time.

The Laboratory note-books of candidates shall be inspected and marked by Examiners and if they are found to be unsatisfactory, the candidates will be disqualified. Note-books which have not been signed at frequent intervals by the Professor under whom the candidates worked will not be accepted.

EXPERIMENTAL PSYCHOLOGY.

Pass Course.

The examination shall consist of the following parts:—

(1) General Psychology ... ... One paper.

The Syllabus shall be identical with the Syllabus in Psychology (Pass Course) for the B.A. Examination.

(2) Experimental Psychology ... ... One paper.

Analysis of Sensation.

Qualities of Sensation. Theory of specific nervous energy. Touch: heat spots, cold spots, pressure spots, pain spots. Taste: distribution of sensitiveness over the tongue, taste mixtures and contrasts. Smell: compensations and contrast. Hearing: simple tones, simple clang and its analysis, timbre, noises and their analysis, partial tones, beats, combination tones. Sight: colour tones, the white black series, saturation; colour zones in the Retina, colour mixtures, colour contrasts, after-images.

Intensity of sensation: methods of measurement. Stimulus-threshold. Difference-threshold. Weber's Law. Fechner's Law. Individual differences of sense endowment.

Analysis of Perception: localisation and projection. Spatial perception. Local signs. Tactile. Localisation of points on the skin. Combined Touch and Movement. Spatial Perception of the Blind. Visual space: the Retinal image, the mechanism of accommodation, Eye-movement. Binocular vision. Perception of form, distance and size. Visual perception of movement. Optical illusions. Auditory perception. Binaural audition. Localisation of sound. Consonance, harmony and rhythm. Illusions and pre-perceptions.

Attention: intensity, duration and fluctuations of attention, maximal range of attention.

Ideation: ideational types, memory-types, Galton's questionary.

Association of ideas, and its conditions. Experimental tests. Time relations of mental phenomena. Reaction time and its elements. Psychophysical time and its elements. Simple Reaction. Complex Reaction, Apperception-time, Will-time, Circuit of consciousness. Effects of Attention, Practice and Fatigue, on Reaction time Subjective estimation of time-length and time order.

(3) Practical Examination ... ... One day.

The practical examination shall be conducted with special reference to the use of apparatus and psycho-physical methods (including statistics), and the mode of carrying out an experimental investigation submitted to the candidate. The candidate shall be required to examine an individual on acuity of senses (including liminal sensations and the difference-threshold), colour vision, tone discrimination, localisation, estimation of spatial and temporal magnitudes, ideational type, intensity and range of attention, association of ideas, and reaction-times.

The Laboratory note-books of candidates shall be inspected and marked by Examiners and if they are found to be unsatisfactory, the candidates will be disqualified. Note-books which have not been signed at frequent intervals by the Professor under whom the candidates worked will not be accepted.

HONOURS COURSE.

The examination shall consist of the following parts:—

(1) General Psychology ... ... One paper.

The Syllabus shall be identical with the Syllabus in Psychology (Honours Course) for the B.A. Examination.

(2) Physiological and Comparative Psychology One paper.

The Nervous System:—

Nerve-tissues: chemical constitution, structural forms, and physiological functions.

The Nervous System of Man:— ...

The sympathetic system, the cerebrospinal system, the spinal cord, and the encephalic centres; structure and functions. Spinal and cranial nerves.

The Muscular System:—

Structure and functions of muscles, muscles and muscular groups, the locomotive apparatus, the human hand, the vocal organs, the so-called nerve-muscle machine.

Nature of nerve current: various theories. The laws of nervous conduction, the paths of conduction in the spinal cord and the brain, automatic and reflex functions of central organs, localisation of cerebral functions.

End-organs of smell, taste, touch, hearing and sight; Structure and functions.

Development of the nervous system in Mollusca, Arthrozoa and Vertebrata. Embryonic development of the nervous system of man. The Physiological basis of spatial perception, localisation, retention, association and revival of ideas, imagination, verbal memory and language, feeling, pleasure and pain, emotional expression, automatic and reflex action, instinct, heredity, attention and acts of the will.

Normal and abnormal states. Subliminal consciousness, double consciousness, hypnotism, reverie, dream, hallucinations, sleep.

Mental evolution in the animal kingdom: instinct and animal intelligence.

Mental evolution in the race: Mental characteristics of primitive races, race-consciousness.

Mental evolution in the Individual. Mental characteristics of different ages and sexes.

(3) Experimental Psychology ... ... Two papers.

In addition to the Pass Course, the following subjects:—

Analysis of sensation:—

Theory of specific energy:—Evidence from the end-organs of Hearing, Sight and Touch

Touch—Temperature:—Determination of the Zero-point, adaptation and contrast in temperature sensations.

Temperature and Pressure spots:—Construction of maps of the skin.

Smell:—The field of smell.

Hearing:—Sensitiveness of the ear to differences of pitch and purity of interval.

Sight:—The colour triangle, the colour pyramid. Laws of colour mixture and colour contrast. Visual after-images, negative and positive. Theories of Helmholtz, Hering and Wundt.

Intensity of sensation:—Stimulus-threshold and difference-threshold for tactile, auditory, visual, and muscular sensations. Fechner's formulæ: interpretations of Weber's Law.

Analysis of Perception:—

Touch:—Discrimination (1) of a single point, (2) of two points on the skin. Discriminative sensibility of the skin for motion.

Localising of muscular sensations.

Visual space:—the Reduced Eye of Listing, corresponding Retinal points and double images. Stereoscopic and Perspective vision

Ideation:—Galton's questionary, and other methods.

Association of ideas:—Experimental tests of frequence, recency and other conditions

Trains of ideas. Speed of mental trains: individual differences.

Time relations of mental phenomena:—

Smallest interval of separate sensations. Rise and fall of intensity of sensation. Simple Reaction—the natural, the sensorial and the muscular reaction. Discernment-time for sensations. Discernment-time for localisation. The reading and the multiplication of numbers. Discernment with choice and speed of decision. Association-time. Individual differences

(4) Practical examination in Experimental Psychology... Two papers.

The practical examination shall cover the entire course as laid down in the above syllabus on Experimental Pyschology. The examination shall be conducted with special reference to the use of apparatus and psycho-physical methods (including

statistics), and the mode of carrying out experimental investigations submitted to the candidate, and shall include the examination of an individual or individuals with regard to any matter within the scope of the syllabus.

The distribution of subjects as regards the examination in Experimental Psychology shall be as follows:—

First theoretical paper, and first day's Practical Examination:—Sensation and Perception.

Second theoretical paper, and second day's Practical Examination:—Attention, Ideation, Association of Ideas, and Time-relations of mental phenomena.

The Laboratory note-books of candidates shall be inspected and marked by Examiners, and if they are found to be unsatisfactory, the candidates will be disqualified. Note-books which have not been signed at frequent intervals by the Professor under whom the candidates worked will not be accepted.

ANTHROPOLOGY.

PASS COURSE.

The Pass Course in Anthropology shall be distributed as follows:—

Paper I.—General outlines of Anthropology.

Paper II.—Ethnology of India with special reference to some particular province.

Paper III.—Practical examination (simple measurement and observations).

The Laboratory note-books of candidates shall be inspected and marked by Examiners, and if they are found to be unsatisfactory, the candidates will be disqualified. Note-books which have not been signed at frequent intervals by the Professor under whom the candidates worked will not be accepted.

HONOURS COURSE.

The Honours Course in Anthropology shall be distributed as follows:—

Paper I.—General outlines of Anthropology.

Paper II.—Ethnology of India with special reference to some particular province.

Papers III & IV.—A general outline of the racial and cultural history of India.

Papers V & VI.—Practical examination (candidates will be expected to be familiar with tribal and racial types and to be able to take selected measurements of

living persons). Suitable Books, Papers and other sources of study will be recommended from time to time by the Board of Higher Studies in Anthropology with a view to indicate the scope and extent of knowledge expected to be possessed by the candidates.

The Laboratory note-books of candidates shall be inspected and marked by Examiners, and if they are found to be unsatisfactory the candidates will be disqualified. Note-books which have not been signed at frequent intervals by the Professor under whom the candidates worked will not be accepted.

Students who have passed the Intermediate Examination with Mathematics, Physics and Chemistry may be examined in one of the following *alternative* Honours Courses:—

COURSE A.

I. Pure Mathematics	...	Two Papers.
II. Applied Mathematics	...	Three Papers.
III. Drawing	...	One Paper and a Practical Examination.
IV. Physics	...	Two Papers and a Practical Examination.
V. Chemistry	...	One Paper and a Practical Examination.

Pure Mathematics shall include—

(*a*) Higher Algebra.
(*b*) Higher Plane Trigonometry.
(*c*) Vector Analysis.
(*d*) Analytical Geometry (Plane).
(*e*) Analytical Geometry (Solid).
(*f*) Differential Calculus.
(*g*) Integral Calculus.
(*h*) Differential Equations.

Applied Mathematics shall include—

(*a*) Statics and graphical statics.
(*b*) Dynamics of a Particle.
(*c*) Elementary Rigid Dynamics.
(*d*) Hydrostatics.
(*e*) Hydraulics.
(*f*) Strength of Materials.

Drawing shall include—

(*a*) Tracing.
(*b*) Descriptive Geometrical Drawing.
(*c*) Drawing from models.
(*d*) Design of machine elements.

Physics shall include—

(*a*) General properties of matter.
(*b*) Heat and technical thermodynamics.
(*c*) Electricity and magnetism including Electro-mechanics.
(*d*) Light.

Chemistry shall include a general knowledge of the subject, with special reference to—

(*a*) Technology of water—determination of hardness and softening process.
(*b*) Fuel—determination of calorific power of different technical fuels.
(*c*) Chemistry of combustion.
(*d*) Lubricating oils—determination of viscosity, flash point and suitability for different purposes.
(*e*) Chemistry of technically important metals with special stress on iron and steel.

COURSE B.

I. Pure Mathematics	...	Two Papers.
II. Applied Mathematics	...	Two Papers.
III. Drawing	...	One Paper including Practical Examinations.
IV. Physics	...	Three Papers and two Practical Examinations.
V. Chemistry	...	One Paper and Practical Examination.

Pure Mathematics shall include—

(*a*) Analytical Geometry (Plane).
(*b*) Analytical Geometry (Solid).
(*c*) Vector Analysis.
(*d*) Differential Calculus.
(*e*) Integral Calculus.
(*f*) Differential Equations.

Applied Mathematics shall include—

(*a*) Statics and graphical statics.
(*b*) Dynamics of a particle.

(c) Elementary Rigid Dynamics.
(d) Hydrostatics.
(e) Hydraulics.
(f) Strength of Materials.

Drawing shall include—

(a) Tracing.
(b) Descriptive Geometrical Drawing.
(c) Drawing from models.
(d) Design of machine elements.

Physics shall include—

(a) General properties of matter.
(b) Heat.
(c) Electricity and magnetism.
(d) Light.
(e) Sound.

Chemistry shall include—

Physical Chemistry.
Candidates will be expected to possess a knowledge of the general principles of Chemistry.

COURSE C.

I. Pure Mathematics	...	One Paper.
II. Applied Mathematics	...	Do.
III. Drawing	...	One Paper including Practical Examination.
IV. Physics	...	Two Papers and a Practical Examination.
V. Chemistry	...	Three Papers and three Practical Examinations.

Pure Mathematics shall include—

(a) Analytical Geometry (Plane).
(b) Analytical Geometry (Solid).
(c) Vector Analysis.
(d) Differential Calculus.
(e) Integral Calculus.
(f) Differential Equations.

Applied Mathematics shall include—

(a) Hydrostatics.
(b) Hydraulics.
(c) Strength of Materials.

Drawing shall include—

(a) Tracing.
(b) Descriptive Geometrical Drawing.
(c) Drawing from models.
(d) Design of machine elements.

Physics shall include—

(a) General properties of matter.
(b) Heat including thermodynamics of heat engine.
(c) Electricity and magnetism including elementary principles of electrical machines.
(d) Light.

Chemistry shall include—

(a) Physical Chemistry.
(b) Inorganic Chemistry.
(c) Organic Chemistry.

The limits of each subject in each course shall be defined by a detailed syllabus to be drawn up from time to time jointly by the Board of Studies and the Board of Higher Studies concerned. Special stress will be laid on the practical applications of the subjects.

100 marks shall be assigned to each written paper and to each practical examination. In order to pass, a candidate must obtain 30 marks in each written paper, 40 marks in each practical examination, and 400 marks in the aggregate. A candidate who obtains 720 marks shall be placed in the First Class and a candidate who obtains 480 marks shall be placed in the Second Class.

Candidates shall be required to produce laboratory note-books and other records of regular work during the entire period of study. These will not be accepted and valued unless duly attested and certified by a recognised teacher at regular intervals. Candidates may be questioned orally with regard to the contents of their note-books and other records.

GENERAL.

1. A candidate must obtain in order to pass in the Pass Course in—

Mathematics	...	100 *marks*.
Any other subject	...	60 *marks* in the theoretical papers.
		40 *marks* in the practical papers.

2. A candidate must obtain in order to pass in the Honours Course in—

Mathematics	...	180 *marks.*
Any other subject	...	108 *marks* in the theoretical papers.
		72 *marks* in the practical papers.

3. A candidate must obtain, in order to attain the Honours standard in—

Mathematics	...	240 *marks.*
Any other subject	...	160 *marks* in the theoretical papers.
		80 *marks* in the practical papers.

4. If a candidate takes up the Pass Course in three subjects he must, in order to pass the B.Sc. Examination, pass in each subject, and obtain 324 marks in the aggregate. If he passes and obtains 450 marks in the aggregate, he shall be declared to have passed with distinction.

5. If a candidate takes up the Pass Course in two subjects and the Honours Course in one subject, he must, in order to pass the B.Sc. Examination, pass in each subject, and obtain 432 marks in the aggregate. If he passes and also attains the Honours standard in his Honours subject, he shall be declared to have obtained second class Honours in that subject. If he passes, attains the Honours standard in his Honours subject, and obtains 360 marks in that subject, he shall be declared to have obtained first class Honours in such subject.

6. Any candidate who has failed in one subject only. by not more than 5 per cent. of the full marks in that subject, and has shown merit by gaining 50 per cent. or more in the aggregate of the marks of the examination, shall be allowed to pass. If any such candidate has taken up the Pass Course in three subjects, he shall not be declared to have passed with distinction. But if the candidate has taken up the Pass Course in two subjects and the Honours Course in one subject, and has attained the Honours standard in such subject, he shall be allowed to retain his Honours and his place in the Honours list.

7. If the Examiners are of opinion that in the case of any candidate not covered by the preceding Regulation, consideration ought to be allowed by reason of his high proficiency in a particolar subject or in the aggregate, they shall report the case to the Syndicate, and the Syndicate may pass such candidate, or give him Honours, as the case may be.

CHAPTER XXXVII.

MASTER OF SCIENCE.

1. An examination for the Degree of Master of Science shall be held annually in Calcutta, commencing at such time as the Syndicate shall determine, the approximate date to be notified in the Calendar.

Any candidate who has passed the B.Sc. Examination not less than two academical years previously may be examined for the Degree of M.Sc. in any subject mentioned in Regulation 5, provided he has prosecuted a regular course of study for two academical years in a College or Colleges affiliated to the University in respect of that subject and standard, or under one or more University Professors or Lecturers in that subject.

Any candidate who has passed the B.Sc. Examination not less than three academical years previously may be admitted as a private student to the M Sc. Examination in Mathematics subject to the provisions of section 19 of the Indian Universities Act.

2. *Every candidate shall send in his application with a certificate in the form prescribed by the Syndicate and a fee of Rs 80 to the Registrar not less than three months before the Examination. If a student desires to appear in the M.Sc. Examination in Experimental Psychology he shall give the Registrar one year's notice of the fact.

3. Any Master of Science may, on payment of a fee of eighty rupees, be admitted to the M.Sc. Examination in any branch other than in which he was previously examined, provided that if he takes up a subject other than Mathematics, he has prosecuted a regular course of study in that subject for a period of two academical years in a College affiliated to the University in respect of that subject and standard, or under one or more University Professors or Lecturers. He shall, if his attainments come up to the standard prescribed for the Degree of M.Sc., be granted a certificate to that effect, stating the subject and class in which he has passed.

4. A candidate who fails to pass, or to present himself for examination, shall not be entitled to claim a refund of the fee. A candidate who fails to pass or present himself may be admitted to any one or more subsequent M.Sc. Examinations on payment of a like fee of eighty rupees on each occasion

* Candidates who take up Mathematics shall send in their applications and fees to the Registrar six months before the commencement of the Examination.

5. A candidate may be examined in any of the following subjects:—

I. Mathematics.
II. Chemistry.
III. Physics.
IV. Botany.
V. Physiology.
VI. Zoology and Comparative Anatomy.
VII. Geology.
VIII. Experimental Psychology.
IX. Anthropology.

6. There shall be a Practical Examination in all subjects other than Mathematics, and candidates shall be required to pass in the practical portion of these subjects as well as in the theoretical portion defined in the Syllabuses.

In Mathematics there shall be eight papers of four hours each. each carrying 100 marks.

In Physics there shall be five theoretical papers of four hours each, each carrying 100 marks, and the Practical Examination shall extend over at least three days and shall carry 300 marks.

In all other subjects there shall be four theoretical papers of four hours each and the practical examination shall extend over at least four days. The total marks shall be equally divided between the theoretical and practical portions of the Examination.

7. The limits of the subjects shall be as follows:—

MATHEMATICS.

Candidates in Mathematics shall be examined in either Pure Mathematics or Mixed Mathematics.

The subjects in Pure Mathematics shall be as follows:—

1. Algebra and Trigonometry, Theory of Equations.
2. Applications to Mechanics.
3. Conics and Higher Plane Curves.
4. Solid Geometry and Differential Geometry.
5. Differential and Integral Calculus.
6. Differential Equations including Spherical Harmonics.
7. One subject to be selected by the candidate from the following groups:—

A. Theory of Functions of a Real Variable.
B. Theory of Functions of a Complex Variable.
C. Theory of Numbers.
D. Theory of Groups.
E. Finite Differences and Applications to Statistics.

F. Modern Geometry.
G. Non-Euclidean Geometry.
H. Quaternions and Vector Analysis.
I. Integral Equations with applications.
J. Elliptic Functions and Higher Transcendentals.
K. Calculus of Variations.
L. Algebra of Quantics.
M. Spherical Astronomy and Hydromechanics.

One four-hour paper shall be set upon each of the first six compulsory subjects and two papers on the optional subject.

The subjects in Mixed Mathematics shall be as follows:—

1. Statics and Theory of Potential.
2. Hydrostatics and Dynamics of a Particle.
3. Rigid Dynamics.
4. Higher Analysis.
5. Hydrodynamics.
6. Spherical Astronomy.

7. One subject to be selected by the candidate from the following group:—

A. Theory of Elasticity.
B. Tides and Surface Waves.
C. Advanced Dynamics.
D. Spherical Astronomy and Theories of Cosmogony.*
E. Celestial Mechanics including Lunar and Planetary Theories.
F. Geodesy and Elements of Geophysics.
G. Electricity and Magnetism.

In paper 4 on Higher Analysis students would be expected to show a knowledge of the following:—

(*i*) Complex Numbers, Convergency of Series of Functions. Riemann Integration, Fundamental Properties of Analytical Functions, Theory of Residues, and Fourier's Series.
(*ii*) Equations of Laplace, Legendre, Bessel and Poisson, Hyper-Geometric Equation, Wave Equation.

One four-hour paper shall be set upon each of the Compulsory subjects, and two papers on the Additional subject.
A candidate who has taken his B.Sc. Degree with Honours in Mathematics may offer a piece of research work in any portion of the subject he has been studying in lieu of examination in two papers in the remaining portion of the examination. The maxi-

* Only a general knowledge of the Mathematical Theories of Rotation, Tidal Deformation and Contraction would be expected.

mum number of marks assigned to the research work shall be equal to the number assigned to the two papers he would otherwise have taken up.

CHEMISTRY.

Candidates in Chemistry shall be examined in the following:—

A. Physical Chemistry.
B. Inorganic Chemistry.
C. Organic Chemistry.

They will be expected to show a detailed knowledge of any one of these branches and a general knowledge of the other two.

There shall be a Practical Examination comprising qualitative and quantitative analysis, and the preparation of chemical specimens.

Candidates must produce note-books of their laboratory work, which must be duly certified by the Professor and shall be taken into account in estimating their qualifications.

Candidates, who have taken their B.Sc. Degree with Honours in Chemistry, may offer a piece of research work in the special branch selected by them in lieu of examination in the Practical papers of the other two branches and in lieu of half of the Practical Examination in their special subject, provided that each candidate who submits a piece of research work in accordance with this rule should submit a certificate to the effect that he has satisfactorily completed a Practical course of study in at least one group of subjects other than that which constitutes his research work. The maximum number of marks assigned to research work shall be three-eighths (*i.e.*, 300 out of 800) of the marks assigned to the whole examination.' "

ALTERNATIVE COURSE IN CHEMISTRY.

GENERAL COURSE.

1. A course of training (both theoretical and practical, including analytical) in Inorganic, Organic and Physical Chemistry to meet the requirements of the Applied Chemistry students.

2. Elementary course in mechanical and electrical engineering, including drawing and workshop practice.

3. Knowing of the more common appliances used in Chemical Industries (together with their theories), including acquaintance with small-scale operations.

4 Special course:

Any one of the following, including drawing up of balance sheets:—

(1) Glass; (2) Ceramics; (3) Tanning; (4) Paints, Pigments and Varnishes; (5) Fats and oils, waxes; (6) Soaps candle, glycerine; (7) Fermentation.

INORGANIC CHEMISTRY.

The Industrial gases.—Large scale preparation, testing of purity, storage and liquefaction; acids, alkalis, and salts; clay and its properties—analysis; manufactures of alum and aluminium sulphate; chrome-alum; superphosphates; slags cement; mortar, hydraulic lime; enamel, porcelain; glass; abrasives; a general course on metallurgy with reference to iron, copper, gold, silver, lead, tin, antimony, zinc, cadmium, aluminium, sodium, Ni, achromium, Hg, silicon; thermite process; uses thereof in the industries; special alloys (tantiron), etc., Byeproduct plant; Chemistry of pigments.

PHYSICAL CHEMISTRY.

Syllabus.

A.—THEORETICAL.*

1. Units.

2. Kinetic theory of matter and its applications—

Solid, liquid and gaseous states; Maxwell's law of distribution of velocities; characteristic equations of gases; hydrogen scale of temperatures; air thermometer; measurement of pressure; Joule-Thomson effect; liquefaction of gases; mechanical production of cold; surface tension; orientation of molecules at surfaces; viscosity.

3. Thermochemistry—

Temperature standards; mechanical equivalent of heat; calorimetry; specific heats; change of energy of transformations with temperature; thermochemical notations; heat balance sheets; measurement of temperature; heating and cooling arrangements; Thermodynamic scale of temperature; thermodynamic functions; Clausius and Clayperon equation; Le Chatileir and Braun's principle of mobile equilibrium.

* Stress will be laid only on the fundamental outlines of the theories and more on a definite knowledge of their applications.

4. **Solutions**—

Law of mixtures, partial molar quantities; dilute solutions; theory of fractional distillation.

5. Chemical Statics—

Real and false equilibrium; thermodynamics and chemical equilibrium; Nernst's heat theorem; Phase law; alloy and silicate systems; elements of metallography.

6. Chemical Dynamics—

Theories of catalysis; space velocity diagrams; chemical and economic efficiency; study of typical industrial gaseous reactions.

7. Electrochemistry—

Electrolytic dissociation; electromotive force of cells; electro-analysis; electroplating; electrolytic industries; indicators.

8. Colloidal solutions; absorption; ultrafiltration; stability; electrical change of hydration; colloids in industries.

9. Photochemistry (elementary treatment).

10. Elementary treatment of radioactivity.

B.—PRACTICAL.

Practical course will correspond to the theoretical syllabus, including an acquaintance with the more important methods of measurement used in industrial processes.

Syllabus for Organic Chemistry.

(1) Theories of Organic isomerism; Stereo isomerism; Geometrical isomerism; Ketenol phases; Transformations; Conceptions of valency as used in Organic Chemistry; Colour and constitution; (2) Group reactions and important synthetic methods; (3) Chlorination, bromination, iodination; nitration, reduction, oxidation, sulphonation, carboxylation; etc.; (4) Organic separation and purification; (5) Technically important preparations.

Syllabus for Special Subject.

Fermentation—

(1) Modern and ancient theories; (2) Bio-chemical laboratory requisites and their use; (3) Anatomy of the more common bacteria and cells; (4) Enzymes and enzyme theories; (5) Moulds; (6) Yeast and its properties; (7) Brewery yeast; distillery and dress yeast wine yeast; (8) Large-scale pure culture for industrial application; propagation apparatus, despatch of pure culture, etc.; (9) Influence of phosphate on alcoholic fermentation; (10) Enzymes, co-enzymes; inorganic ferments; Carboxy-

lase of Neuberg; Erhlich's work; origin of fusel oil in yeast fermentation of sugars; the polypeptides; (11) Reductase and Oxidase—Bach's theory; (12) Laccase, lipase, etc.; (13) Critical review of the lactic acid; glyceraldehyde-dihydroxy acetone, pyruvic acid and formic acid theories of alcoholic fermentation; Graaf and Le Fevre's theory; Slator and Wolfgang Ostwald's views, etc.; (14) Sources of alcohol, natural and synthetic; comparison and costs; (15) Distillation of alcohol; various types of stills; purification processes, solid alcohol; use in engines; (16) acetone manufacture; vinegar; lactic acid; butyric acid, rubber industry.

Syllabus for Chemical Technology.

Manufacture of commercially important drugs; acids; alkalis; alkaloids (quinine, strychnine, etc.); indigo; alizarin, and other important dyes; antiseptic; essential oils; perfumes and perfumery requisites; cellulose; leather; pulp; canesugar; soap; glycerine; margarine; vegetable oils; earth oil; artificial silk; rubber; fermentation; fertilisers; inks; explosives; celluloids; glass; enamel; porcelain; cement; hydraulic lime; and other more important industries.

Syllabus for Chemical Engineering.

(1) Industrial units, (2) Fluids film, (3) Flow of fluids, (4) Flow of heat, (5) Fuels and power, (6) Furnaces and kilns, including gas-producers, (7) Crushing and grinding, (8) Mechanical separation, (9) Filtration, (10) Evaporation, (11) Drying, (12) Distillation, (13) Transport of solids, liquids and gases, etc., (14) Reaction chambers, etc.

PHYSICS.

Candidates in Physics will be expected to possess a sound knowledge of the general principles of the subject, including the more fundamental advances made of recent years and a detailed knowledge of a special selected topic as indicated below.

Five theoretical papers shall be set, of which the first three shall cover a general course of Mathematical and Experimental Physics distributed as follows:—

Paper I.

(*a*) Mechanics of Solids and Fluids, including Vibrations and Wave-motion.

(b) General Properties of Matter and Kinetic Theory of Gases.

Paper II.

(a) General Theory of Heat and Thermodynamics.
(b) Optics of Transparent Media.

Paper III.

Electricity and Magnetism including Elements of Electromagnetic Theory of Light.

The fourth paper shall cover generally the more recent and fundamental developments in Electrical Theory distributed as follows:—

Paper IV.

Elements of Electron Theory and Quantum Hypothesis including, experimental methods in the study of Electrons, X-radiation, Positive Rays and Radio-activity.

The fifth paper shall be set on a special topic of which the candidate is expected to possess a detailed knowledge.

Appended is a list of such topics which may be added to or modified from time to time by the Board of Higher Studies in Physics.

Paper V.

One of the following subjects:—

A. Theory of Optical Instruments.
B. Spectroscopy.
C. Dispersion and Scattering of Light.
D. Advanced Acoustics.
E. Advanced Thermodynamics and Kinetic Theory of Matter.
F. Electrical Oscillations and Wireless.
G. X-rays and Crystal Structure.
H. Relativity.

The practical Examination shall consist of three parts. The first part shall be so conducted as to test the candidate's general proficiency in physical experiments and measurement. The second and third parts shall test his proficiency in advanced electrical work and his practical knowledge of the special subject offered by him for the fifth theoretical paper.

Candidates who have taken their B.Sc. Degree with Honours in Physics or Mathematics may be permitted to offer

a piece of research work in lieu of the fifth theoretical paper. Before such permission is granted, the candidate will be required to produce a duly certified Laboratory record and satisfy the Board of Higher Studies in Physics by appearing at a practical test or otherwise, that he has during the first year's course of study diligently carried out a course of Practical work. The production of the thesis will then exempt him from any further practical Examination. The maximum marks allotted to the research work shall be 300, and 100 marks shall be allotted to the special *viva voce* examination of the candidate on the subject of his thesis.

The candidates who offer a piece of research work shall be grouped in order of merit separately from the others appearing at the examination.

ALTERNATIVE COURSE IN PHYSICS.

ELECTRICITY AND MAGNETISM.

Lectures—

1. Electrostatics and Electrodynamics.

2. Theory of electrical instruments (general), galvanometers, electrometers, amperemeters, voltmeters, measurements of resistances, current voltages, capacity induction.

3. Theory of electrical instruments (special), Oscillographs, Watthourmeters, Phasemeters, Frequencymeters, Characteristics of dynamos and motors.

4. Principles of generation of electric currents, low voltage generation, storage cells.

Medium voltage generation, Direct current generators, Dynamos, Alternators of different types, Turbo alternator, Motor generator, Rotary convertors.

High voltage generation, Transformers, Theory of transformer (the different types).

Wave from frequency phase, rectification.

Motors of different types.

Direct current series, shunt, compound wound starter, Speed regulator.

Alternate current induction motor, synchronis motors, ship ring motors, polyphase motors Starter, speed regulation.

Effect of inductance and capacity.

Special paper.

5. High-Frequency current.
   Their generation and reception in Radio telegraphs.

6. Illumination Technology.

Practical—

(*a*) Accurate measurement of low resistances.
(*b*) ,, ,, ,, voltage.
(*c*) ,, ,, ,, amperage.
(*d*) Standardisation of thermocouples.
(*e*) ,, ,, Platinum thermometers.
(*f*) Measurements of insulation resistances.
(Coils, switches, fust boxes, cleats, telegraph and telephone insulators, the resistances of insulation of field coils and armatures of motors.)

7. Measurements of Permeability of different samples of iron and heat loss in complete cycles.

(*a*) By anchor ring method.
(*b*) Hopkinson double yoke method.
(*c*) Ewing's Permeameters.
(*d*) Kopsel's Permeameters.
(*e*) Maquetometer methods.
(*f*) Rapid anchor ring method of Kapp.

8. Determination of Magnetic field.

(*a*) Sluxmeter.
(*b*) Standard coil and Ballistic Galvanometer.
(*c*) Lenard's spiral.

9. Measurement of capacity.
10. Measurement of Induction.
Coeff. of self-Induction.
,, ,, mutual induction of two circuits.
11. Measurements of the ratio of transformation of two circuits.
12. The dielectric capacity of oils and mica ebonite glass.
13. Study of the wave form of different types of generator.

(*a*) Duddel oscillograph.
(*b*) Cathode-ray Oscillograph.

14. The characteristic curves of dynamos and motors.
15. Accurate measurement of frequency of oscillation.
16. Study of the characteristics of the wave forms of high-frequency currents with Cathode-ray oscillograph.
17. Life curves of different class of electric lamps.
18. Study of a storage cell.
19. Study of the horse power of a motor.

(*a*) Prony brake.
(*b*) Friction brake.
(*c*) Absorption dynamometers.
(*d*) Cradle type dynamometers.

20. Study of the different losses of motors.
   (*a*) Iron loss, Eddy current and Hysteresis loss.
   (*b*) Heat loss.
   (*c*) Friction and windage.

21. Study of A. C. motors.
   (*a*) Torque variation.
   (*b*) Effect of capacity.
   (*c*) Phase alternation.

HEAT.

Lectures—

1. *General Heat* comprising thermometry, specific Heat, change of state, conduction, radiation.
2. *General principles of thermodynamics.*
3. *Kinetic theory of gases.*
4. *Technical thermodynamics.*
   Theory of Heat Engines.
   (*a*) Steam Engines:—
      Condensing, non-condensing.
      Single expansion, double expansion, compound uniflow locomobile.
      Action of superheated steam.
      Steam, diagram.
      θ ϕ diagram, the ideal cycles and the actual cycles, the action of the valves and valve gears.
   (*b*) Internal combustion engines.
      Four cycle.
      Two cycle.
   (*i*) Ignition type, explosion type.
      Semi-Diesel.
   (*ii*) Diesel type.
      The theoretical consideration of efficiency of different types p v. indicator diagrams θ ϕ diagrams.
5. *Theory of Refrigeration.*
   Thermodynamics of Joule Thomson effect.
   Properties of CO_2 Ammonia SO_2
   Compression and temperature drop.
   Heat Exchange.
6. *General Properties of Matters.*
   Elasticity and Elastic Limits.
   Young's Modulus and Poisson Ratio Rigidity and Shear
   Hardness and Hertz's theory of Impact, Viscosity and Lubrication.
   Torsional rigidity, Bending moment, etc.

Practical—

1. Mechanical Equivalent of Heat.
2. Conductivity of solids, liquids and gases.
3. Variation of specific heat with temperature of gas and gas mixtures.
4. Measurements of high temperatures, Pyrometry (Black body radiation).
5. Study of an internal combustion engine.
   (*a*) Pressure volume record (Indicator diagram by micro-indicator).
   (*b*) Calorific value of liquid fuel by Mahlercook apparatus.
   (*c*) Calorific value of gas mixtures in engine cylinders (by Boy's gas calorimeter).
   (*d*) Viscosity and flash point determination of different liquid fuels.
   (*e*) Determination of CO in the exhaust gas (by platinum thermometer).
   (*f*) Measurement of the Iorsepower of an engine by Prony brake.
   (*g*) Determination of the Joule effect in Oxygen, CO_2, NH_3, by gas compressor and platinum thermometer.
   Determination of Young's modulus by bending and Poisson's ratio.
   Determination of Hardness by law of impact by two ball methods.
   Determination of viscosity of liquids and gases.

A Course on Drawing.

Screw threads—Forms and proportions of Bolts, Nuts, screws and studs.
Shafts, Pedestals, Hangers, Brackets.
Valves of Steam Engine, Slide Valves.
Corliss valve, Tappet valves of Oil Engines.
Crankrods and cylinders of different types of Oil Engines, Bearings, Thrust Bearing, Ball Bearing, Drawings for high speeds.
Designing of Generators and motors of small capacities.

Workshop Practice.

1. Fitting—Internal and external angle gauges.
2. Simple turning of round rod, flat disc.
3. Screw cutting with a lathe.
4. Drilling.
5. Milling.

6. Simple grinding of two true surfaces.
   Cylindrical grinding.
   Internal and external grinding.
7. Testing of a lathe bed and performance of various chucks.

BOTANY.

Candidates in Botany shall be examined in—

(1) Thallophyta, Bryophyta and Plant Diseases.
(2) Pteridophyta, Gymnosperms and Fossil Botany.
(3) Angiosperms and Geographical Botany.
(4) Physiology and Ecology.
(5) Theories of Evolution, Plant-breeding, Economic Botany and History of Botany.

The Practical Examination shall include (*a*) the making of microscopic sections of plants or parts of plants including staining and application of micro-chemical reagents; (*b*) examination, description and identification of microscopic preparations provided by the Examiners or made by the candidates; (*c*) examination, description, systematic determination and identification of plants or parts of plants; (*d*) the performance of physical or chemical experiments, or the setting up and description of apparatus, relating to the physiology of plants.

Candidates must produce note-books of their laboratory work which must be duly certified by the Professor, and shall be taken into account in estimating their qualifications.

Five theoretical papers shall be set under the above heads, one under each. Each paper shall be of four hours' duration and shall carry 100 marks. The Practical Examination shall be conducted by four papers, each carrying 75 marks.

Candidates, who have taken their B.Sc. Degree with Honours in Botany, may be permitted to offer a piece of research work in lieu of the fifth theoretical paper and two practical papers. Before such permission is granted, the candidate will be required to produce a duly certified laboratory record, and satisfy the Board of Higher Studies in Botany by appearing at a practical test or otherwise, that he has during the first year's course of study, diligently carried out a course of Practical work. The maximum marks allotted to the research work shall be 250, and 150 marks shall be allotted to two Practical papers of 75 marks each, to be selected by the candidate.

PHYSIOLOGY.

The candidate must be prepared to submit himself to a very thorough examination in Physiology. He shall name a particular

branch of Physiology which he has made a special study of, and in which the examination will be more searching than in the rest.

The Practical Examination shall include—

I. Chemical Physiology.
II. Histology.
III. Experimental Physiology.

The candidates shall name for part of his Practical Examination one of the above subjects in which the test shall be more searching than in the others.

Candidates must produce note-books of their Laboratory work, which must be duly certified by the Professor, and shall be taken into account in estimating their qualifications.

Candidates who have taken their B.Sc. Degree with Honours in this subject shall be allowed to offer a piece of research work in the branch in which they have specialized in lieu of a portion of the examination in the other part, not carrying more than 200 marks.

ZOOLOGY AND COMPARATIVE ANATOMY.

The candidate must be prepared to submit himself to a thorough examination in Zoology. He shall name a group of animals of which he has made a special study and in respect of which the examination will be more searching than in the rest.

The Practical Examination shall include dissection, microscopical examination and description of types selected out of the group of animals referred to above. The candidate must be prepared to show his practical acquaintance with histological and embryological technique.

Candidates must produce note-books of their Laboratory work, which must be duly certified by the Professor, and shall be taken into account in estimating their qualifications.

Candidates who have taken their B.Sc. Degree with Honours in this subject shall be allowed to offer a piece of research work in the branch in which they have specialized in lieu of a portion of the examination in the other part, not carrying more than 200 marks.

GEOLOGY.

Candidates who offer themselves for examination in Geology for the M.Sc. Degree may elect to specialize in either—

(*a*) The Mineralogical and Petrological branch, or (*b*) the Stratigraphical and Palæontological branch.

All candidates will be expected to show a knowledge of the History of Geological Science, and to possess an intimate acquaintance with the economic aspects of the branch in which they elect to be examined, with special reference to the mineral deposits of India, their exploitation by indigenous methods in the past, and a knowledge of recent developments.

Candidates must produce note-books of their practical work, including field work in which they participated. These must be duly certified by the teacher, and shall be taken into account in estimating their qualifications.

Candidates who have taken their B.Sc. Degree with Honours in this subject shall be allowed to offer a piece of research work in the branch in which they have specialised in lieu of a portion of the examination in the other part, not carrying more than 200 marks.

EXPERIMENTAL PSYCHOLOGY.

1. The examination shall consist of the following parts:—

Theoretical—

(*a*) Physiological Psychology ... ... *One paper.*

(*b*) Mental Pathology ... ... *One paper.*

(*c*) Animal Psychology, with Mental Evolution in the Animal Kingdom ... ... *One paper.*

(*d*) Child Psychology, with Mental Evolution in the Individual ... ... *One paper.*

Practical—

Experimental Psychology ... ... *Four days.*

(*i*) Sensation.

(*ii*) Perception, Ideation, Association of Ideas, and Attention.

(*iii*) and (*iv*) Time-relations of Mental phenomena, affective states and their influence on motion.

2. Candidates who have passed the B.Sc. Examination with Honours in Experimental Psychology may offer a piece of research work in (*a*) or (*b*) in lieu of examination in (*c*) and (*d*) or a piece of research work in (*c*) or (*d*) in lieu of examination in (*a*) and (*b*).

No candidate shall be excused any portion of the practical examination.

The maximum number of marks assigned to the research work shall be 200.

3. Candidates must produce note-books of their Laboratory work, which shall be duly certified by the Professor, and shall be taken into account in estimating the candidates' qualifications.

ANTHROPOLOGY.

The course in Anthropology shall include both Physical and Cultural Anthropology. Physical Anthropology shall be studied

from the zoological, palæontological, physiological, psychological and ethnological point of view. Cultural anthropology shall be studied from the archæological, technological, sociological, linguistic and ethnological point of view. The entire subject shall be treated with special reference to Indian conditions and problems past and present. Candidates shall be expected to possess a general knowledge of such subsidiary subjects as archæology, human anatomy, geography, psychology, zoology, physiology, statistics with special reference to biometries, in so far as such acquaintance is necessary for the proper understanding of anthropology; but they shall not be required to pass a special examination in the subsidiary subjects.

Six theoretical papers of four hours each shall be set at the examination; there will also be an oral and practical examination extending over two days. Each written paper shall carry 100 marks; and 200 marks shall be allotted to the oral and practical examination. In order to pass, a candidate must obtain 216 marks in the aggregate of the written papers, and 72 marks in the oral and practical examination; but if in any written paper, a candidate obtains less than 25 marks, those marks shall not be included in his aggregate. Candidates obtaining 360 marks shall be placed in the second class and those obtaining 480 marks in the first class.

Candidates may be permitted to substitute a piece of research work in lieu of written examination in two papers, provided they possess such qualifications and fulfil such conditions as may, from time to time, be prescribed in this behalf by the Board of Higher Studies concerned.

Detailed syllabuses will be prescribed and books recommended from time to time by the Board of Higher Studies concerned, so as to indicate the extent and standard of knowledge required.

GENERAL.

8. (*a*) In order to pass in Mathematics a candidate must obtain 264 marks. No minimum pass marks shall be required in each paper, but if in any paper a candidate obtains less than 20 marks, those marks shall not be included in his aggregate. Candidates obtaining 320 marks shall be placed in the second class and those obtaining 400 marks in the first class.

(*b*) In order to pass in any subject other than Mathematics a candidate must obtain 132 marks in the aggregate of the four theoretical papers and 160 marks in the Practical Examination. If in any theoretical paper a candidate obtains less than 25 marks, these marks shall not be included in his aggregate. Candidates obtaining 360 marks shall be placed in the second class and those obtaining 480 marks in the first class.

9. As soon as possible after the examination the Syndicate shall publish a list of candidates who have passed in each subject arranged in three classes and in order of merit. Candidates shall be bracketted together unless the Examiners are of opinion that there is clearly a difference in their merits.

Each successful candidate shall receive with his Degree of M.Sc. a certificate setting forth the subject in which he was examined, and the class in which he was placed.

10. The candidate who is placed first in the first class in each branch shall receive a Gold Medal and a prize of books to the value of Rs. 200, and the candidate who is placed second in the first class in each branch shall receive a Silver Medal and a prize of books to the value of Rs. 100.

11. In all cases where a candidate is allowed to substitute a piece of research work for part of the examination the following conditions shall be observed:—

(*a*) He must have completed one year's study including a full course in the subject in which he intends to offer a piece of research work.

(*b*) He must at the end of the year in question submit to the Syndicate an application for permission to offer a piece of research work in lieu of part of the examination.

(*c*) The application shall indicate the particular piece of research which he wishes to take up and must be recommended by the Professor or Professors under whom he has been working.

(*d*) If the application be granted by the Syndicate the research must be carried on under the direction of the Professor or Professors with whom the candidate is prosecuting his studies.

(*e*) The candidate shall draw up a complete report of the particular research work done by him and shall deliver this report to the Registrar at least a month before the first day of the M.Sc. Examination at which he intends to present himself.

(*f*) Every candidate submitting a thesis at the M.A. (Science) or M.Sc. Examination shall be subjected a *viva voce* Examination on the thesis with a view to testing his acquaintance with any previous work that has been done in the particular line of research taken up by him. The *viva voce* Examination shall be jointly conducted by the Internal Examiner and one of the External Examiners appointed to examine the thesis; and 25 per cent. of the marks allotted to the thesis shall be set apart for the *viva voce* Examination of the candidate.

CHAPTER XXXVIII.

DOCTOR OF SCIENCE.

1. Any Master of Science of the University of Calcutta who has been placed in either the first or the second class at the examination for the Degree of Master, may offer himself as a candidate for the Degree of Doctor of Science, provided three years have elapsed from the time when he passed the examination.

2. Every candidate shall state in his application the special subject within the purview of the Regulations for the Degree of Master of Science, upon a knowledge of which he rests his qualification for the Doctorate, and shall, with the application, transmit three copies, printed or type-written, of a thesis that he has composed treating scientifically some special portion of the subject so stated, embodying the result of research, or showing evidence of his own work, whether based on the discovery of new facts observed by himself or of new relations of facts observed by others or tending generally to the advancement of Science. The candidate shall indicate generally in a preface to his thesis and specially in notes, the sources from which his information is taken, the extent to which he has availed himself of the work of others, and the portions of the thesis which he claims as original; he shall further state whether his research has been conducted independently, under advice, or in co-operation with others, and, in what respects his investigations appear to him to tend to the advancement of Science.

3. Every candidate may also forward with his application three printed copies of any original contribution or contributions to the advancement of the science professed by him, or any cognate branch of science, which may have been published by him independently or conjointly, and upon which he relies in support of his candidature.

4. No application shall be entertained unless two Members of the Faculty of Science, or two Doctors of Science shall have testified, to the satisfaction of the Syndicate, that in habits and character, the candidate is a fit and proper person for the Degree of Doctor.

5. Every candidate shall forward with his application a fee of Rs. 200. No candidate who fails to pass or present himself for examination shall be entitled to claim a refund of the fee.

6. The thesis mentioned in Regulation 2 and the original contributions, if any, mentioned in Regulation 3, shall be referred by the Syndicate to a Board of three Examiners.

7. If the thesis is approved by the Board, and, if the candidate has obtained a first class at the examination for the Degree of Master of Science, he shall not be required to submit to any further written examination; but he may be required by the Board, at their discretion, to appear before them to be tested orally, or practically, or by both these methods, with reference to the thesis, and the special subject selected by him. The Board shall report to the Syndicate the result of the examination of the thesis, and of the oral and practical examinations, if any; and if the Syndicate, upon the report, consider the candidate worthy of the Degree of Doctor of Science, they shall cause his name to be published, with the subject of his thesis, and the titles of his published contributions (if any) to the advancement of Science.

8. If the candidate is a person who has obtained a second class at the examination for the Degree of Master of Science, and if his thesis is approved by the Board he shall be required to submit to a written examination.

Two papers of three hours each shall be set, one upon the special subject mentioned in the application of the candidate, and the other upon the subject of the thesis. The candidate may also be required by the Board, at their discretion, to appear before them to be tested orally or practically, or by both these methods, with reference to the thesis and the special subject professed by him. The Board shall report to the Syndicate the result of the examination of thesis, and of the written examination, and also of the oral and practical examinations, if any, and if the Syndicate, upon the report, consider the candidate worthy of the Degree of Doctor of Science they shall cause his name to be published, with the subject of his thesis, and the titles of his published contributions (if any) to the advancement of Science.

9. In the case of a candidate falling under the preceding Regulation, if the Board upon an examination of his thesis and of his original contribution or contributions to the advancement of Science, hold the same to be generally or specifically of such special excellence as to justify the exemption of the candidate from the written examination, he may be exempted by the Syndicate, provided that the report of the Board shall set forth the fact and the grounds of such exemption.

10. A diploma under the seal of the University, and signed by the Vice-Chancellor shall be delivered at the next Convoca-

tion for conferring Degrees to each candidate who has qualified for the Degree.

11. Every candidate shall be at liberty to publish his thesis, and the thesis of every successful candidate shall be published by the University, with the inscription: "Thesis approved for the Degree of Doctor of Science in the University of Calcutta."

CHAPTER XXXIX.

LICENTIATE IN TEACHING.

1. An Examination for Licentiate in Teaching shall be held annually in Calcutta* at such time as the Syndicate shall determine, the approximate date to be notified in the Calendar.

2. Any candidate may be admitted to the examination not less than two years after passing the Intermediate Examination in Arts or Science, provided he has attended a regular course of lectures† on the Art and Theory of Teaching in a college or colleges affiliated in Teaching, and has in addition, (*a*) undergone a course of practical training for a period of six consecutive months at a Training School approved by the Syndicate for the purpose, or (*b*) served as a Teacher at some recognised school for one academical year previously to the examination. The theoretical portion of the course shall consist of the following subjects:—The Theory and Practice of Teaching in relation to Mental and Moral Science, (2) Methods of teaching specific subjects, and school management, (3) a selected educational classic or classics, and (4) a selected course in modern English, Prose and Poetry.

3. There shall be a written examination in each of the subjects (1), (2), (3) and (4) and a practical examination for testing skill in teaching by means of lessons to be given by the candidate to a class or classes at some recognised school in Calcutta on any three of the following groups of subjects selected by him—

(*i*) English.
(*ii*) A Classical Language.

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* The Examination may also be held in such places other than Calcutta as the Syndicate may appoint from time to time.

† This condition will not be enforced so long as there is no College affiliated for this purpose.

(*iii*) Bengali.
(*iv*) History.
(*v*) Mathematics.
(*vi*) Geography.
(*vii*) Elementary Physics and Chemistry.
(*viii*) Elementary Mechanics.
(*ix*) Kindergarten and Object Lessons.

4. There shall be one paper in each of the subjects (1), (2), (3) and (4). The paper on (3) shall include an Essay on an Educational subject carrying 50 marks. Each paper shall be of three hours, and shall carry 100 marks. 300 marks shall be allotted to the practical examination. In order to pass, a candidate must obtain 36 marks in each of the subjects (1), (2), (3) and (4), and 120 marks in the practical examination. Candidates obtaining 420 marks shall be declared to have passed with distinction.

A fee of Rs. 30 shall be payable by every candidate. If the candidate fails to pass or present himself at the examination, he shall not be entitled to claim a refund of the fee.

5. No candidate shall be allowed to appear for the practical examination till he has passed in the theoretical portion. A candidate may present himself for examination in the theoretical portion one year after passing the Intermediate Examination in Arts or Science: and if he passes he may appear in the practical portion of the examination in a subsequent year.

6. The limits of the different subjects shall be as follows:—

(1) Theory and Art of Teaching in relation to Mental and Moral Science.

(*a*) General Analysis of Mind; fundamental processes and activities with their laws and conditions.
(*b*) The physical basis of mental life; sensation, perception, attention, memory, association of ideas, assimilation of knowledge, feeling and volition; their associated physical conditions.
(*c*) Mental evolution in the individual—characteristics of different ages:—infancy and childhood—the school age, and the succeeding period.
(*d*) The training of the senses:—co-ordination of sense and movement.
(*e*) The cultivation of attention and interest—the cultivation of the imagination and the emotions—the æsthetic basis of intellectual education.
(*f*) The logical basis of education—Logical Method—theory of the five formal steps—abstraction, generalisation and conception—order of the acquisition of knowledge.

(*g*) Language, Imitation and Play as factors in education. Growth of the linguistic faculty.
(*h*) The training and discipline of the emotions—cultivation of Sympathy and the Social Emotions—of the moral sentiment.
(*i*) The training of the will—formation of habits—Rewards and punishments—authority and discipline—the moral standard—the moral idea and moral progress.
(*j*) Characters of individual children—marks of brightness and cleverness—marks of deficiency and abnormality—atavism, physical and moral.
(*k*) Tests of visualising power, memory, verbal memory, command of language, sense of number, and the computing capacity, with the conditions of their growth and decline.
(*l*) Educational values and educational ends, Education: classical and scientific, liberal and technical, general and special. Civic education. Co-ordination and sequence of studies. National systems of education: the primary, the secondary, and the University stage.

(II) Methods of teaching specific subjects, and school management.

Methods:
Special:
Training:—Drawing, drill and active songs, gymnastics and games.
Humanistic studies:—General treatment. Mother tongue. Foreign Language, Grammar and Composition, Literature, History.
Naturalistic studies:—General treatment. Object lessons. Geography, Arithmetic, Geometry and Algebra. Elementary Scientific lessons. Every-day Science. Elementary Mechanics, Elementary Physics and Elementary Chemistry.
General:—Co-ordination of particular studies. Preparation of teaching notes and lessons. Use of the blackboard. Questioning and conversations. Oral lessons and book-work. Excursions.

School Management: Organisation of Schools. Co-ordination and sequence of studies. Classification of scholars, various methods of grading pupils. Management of a class. Apportionment of time. The time-table and recreation. Methods of examination. Registers and returns. Progress reports. Promotions and rewards. Corporal punishment in schools. Discipline and the formation of habits. Relations of teachers to

pupils out of school hours. Physical exercise. Hygienic conditions. Experimental study of children, and record of results. Attention to individual children. School buildings—their structure, fitting and furniture. Books and apparatus.

(III) English.

Books shall be prescribed from time to time by the Syndicate on the recommendation of the Board of Studies in English. The works shall be of the same standard of difficulty as the B.A. Pass English texts.

CHAPTER XL.

BACHELOR OF TEACHING.

1. An Examination for the Degree of Bachelor of Teaching shall be held annually in Calcutta* at such time as the Syndicate shall determine, the approximate date to be notified in the Calendar.

2. Any candidate may be admitted to the examination not less than one year after passing the B.A. or B.Sc. Examination, provided he has attended a regular course of lectures† on the Art, Theory and History of Teaching in a College or Colleges affiliated in Teaching, and has, in addition, either (*a*) undergone a course of practical training consisting of not less than 50 lessons for a period of six consecutive months at a Training School approved by the Syndicate for the purpose, or (*b*) served as a Teacher at some recognised school for one academical year previously to the examination. The Theoretical portion of the course shall extend over one academical year, and consist of the following subjects:—(1) The Theory and Practice of teaching in relation to Mental and Moral Science, (2) Methods of teaching specific subjects, and school management, (3) the History of Educational Ideas and Methods, and (4) a selected educational classic or classics.

Any candidate who has passed the examination for the Licentiate in Teaching and has also graduated in Arts or in

* The examination may also be held in such places other than Calcutta as the Syndicate may appoint from time to time.

† This condition will not be enforced so long as there is no College affiliated for this purpose.

Science may be admitted to this examination without compliance with the conditions laid down in the above paragraph.

3. There shall be written examination in each of the subjects (1), (2), (3) and (4) and a practical examination for testing skill in teaching by means of lessons to be given by the candidate to a class or classes at some recognised school at Calcutta on three of the following subjects selected by him:—

(*i*) English.
(*ii*) A Classical Language.
(*iii*) Bengali.
(*iv*) History.
(*v*) Mathematics.
(*vi*) Geography.
(*vii*) Elementary Physics and Chemistry.
(*viii*) Elementary Mechanics.
(*ix*) Kindergarten and Object Lessons.

4. There shall be one paper in each of the subjects (1), (2), (3) and (4). The paper on (4) shall include an Essay on an Educational subject, carrying 50 marks. Each paper shall be of three hours, and carry 100 marks. 300 marks shall be allotted to the practical portion of the examination. In order to pass a candidate must obtain 36 marks in each of the subjects (1), (2), (3) and (4), and 120 marks in the practical examinations. Candidates obtaining 420 marks shall be placed in the first division.

The first student in the first division shall be entitled to a prize of books of the value of Rs. 100.

5. A candidate may present himself for examination in the theoretical portion in one year, and in the practical portion in a subsequent year, but no candidate shall be admitted to the practical examination, who has not passed the written examination. A fee of Rs. 40 shall be payable by every candidate. If the candidate fails to pass or present himself at the examination, he shall not be entitled to claim a refund of the fee.

6. The limits of the different subjects shall be as follows:—

(I) The Theory and Art of Teaching. The subjects prescribed for the Licentiate in Teaching treated more fully.

(II) Methods of teaching specific subjects and School Management. The subjects prescribed for the Licentiate in Teaching treated more fully.

(III) History of Educational Ideas and Methods.

Oriental:—Ancient and Mediæval Hindu Education. Mediæval Mahomedan Education.

Western:—Greek, Roman and Mediæval Education. The Renaissance. The Jesuits and the Jansenists. Revolt from classification and return to Nature. Scientific Psychology and the Science of education. Child Psychology and Pedagogics.

Outlines of the Organisation and History of national systems of education with special reference to England, Germany, America and Japan.

CHAPTER XL(A).

DIPLOMA IN SPOKEN ENGLISH.

1. An examination for a Diploma in Spoken English shall be held annually in Calcutta and shall commence at such time as the Syndicate shall determine, the approximate date to be notified in the Calendar.

2. Every candidate for the Diploma must have passed one of the following examinations in this University:—

Master of Arts.
Master of Science.
Bachelor of Arts.
Bachelor of Science.
Bachelor of Teaching.
Licentiate in Teaching.

3. Every candidate for the Diploma shall produce certificate to show that he has received training in elocution for a period of not less than one year under a teacher, recognised for this purpose by the Board of Higher Studies in English.

4. Every candidate for admission to the examination shall send his application to the Registrar with a certificate in the form prescribed by the Board of Higher Studies in English, and a fee of Rs. 50, not less than three months before the date fixed for the commencement of the examination.

5. A candidate who fails to pass or present himself for examination, shall not be entitled to claim a refund of the fee. A candidate may be admitted to one or more subsequent examinations on payment of a like fee of Rs. 50 on each occasion.

6. The examination shall be written and oral, and shall be conducted on the lines of a syllabus to be drawn up from

time to time by the Board of Higher Studies in English and Board of Studies in English jointly. The Examiners shall be appointed by the Syndicate on the joint recommendation of the Boards.

7. The written examination will consist of one paper and will be held with a view to test a candidate's knowledge of the elements of phonetics with special reference to the pronunciation of English words.

8. The oral examination will be held mainly with a view to test a candidate's power of elocution and his ability to carry on an ordinary conversation in English.

9. As soon as possible after the examination, the Syndicate shall publish a list of successful candidates, arranged in order of merit, in two classes. Candidates shall be bracketted together unless the Examiners are of opinion that there is clearly a difference in their merits. The candidate who is placed first in the First Class shall receive a gold medal and a prize of books to the value of Rs. 200, the candidate who is placed second in the First Class shall receive a silver medal and a prize of books to the value of Rs. 100.

SYLLABUS.

Written Examination (Sec. 7).

Simple questions will be set on

(a) The organs of speech,
(b) The use of the voice (articulation, phrasing, pitch),
(c) The classification and production of sounds.

Students are recommended to consult the following books:—

* D. Macintyre ...	Sources and Sounds of the English Language.
* H. H. Hulbert ..	Voice Training in Speech and Song
* W. Rippmann ...	Sounds of Spoken English.
* W. Rippmann ...	Elements of Phonetics.
W. Victor ...	The Teacher's Manual.
H. Sweet ...	Sounds of English.
H. Sweet ...	Primer of Spoken English.
Jesperson ...	History of English Language, Part I.
* G. Noel Armfield ...	General Phonetics.

* The more important books in the above list are marked with an asterisk.

Oral Examination (Sec. 8).

(*a*) Reading—(*i*) Prose; (*ii*) Poetry.
(*b*) Recitation.
(*c*) Conversation.
(*d*) A short speech.

100 marks shall be assigned to the written examination; the minimum required for a pass shall be 30 marks.

400 marks shall be assigned to the oral examination; the minimum required for a pass shall be 200 marks.

No candidate shall be declared to have passed, unless he shall have obtained the prescribed minimum in the written as also in the oral examination.

Candidates who pass and obtain 300 marks in the aggregate shall be placed in the first class.
